

A  
TREATISE

O F 1191.e.12.

Vapours,

O R,

Hysterick Fits.

CONTAINING

An Analytical Proof of its Causes, Mechanical  
Explanations of all its Symptoms and Acci-  
dents, according to the newest and most  
Rational Principles: Together with its  
Cure at large.

By John Purcell, M. D.

L O N D O N,

Printed: and Sold by H. Newman at the Grass-  
hopper in the Poultry, and N. Cox at the  
Bible without Temple-Bar, 1762:

70





TO THE  
HONOURABLE

Sir John Talbott.

Sir,

**I** Take the Liberty of prefixing your Name to this Treatise, that there may be something in it which cannot fail of being acceptable to the Reader. I shall not undertake to dwell upon your Encomiums, those things are so usual in all Dedications, that they are, at least seem to be, altogether unregarded: I must own I am as incapable of doing Justice to your Merit, as you are unwilling to have it Attempted; and if I have any thing to Value my self upon, 'tis the Honour of being your Relation; 'tis the highest Compliment I can make my self, to say I am so; and yet I should be Prowder to be ally'd to your Virtues, than to your Blood. I am glad of all Occasions to shew how much I am devoted to your Service, and if

# The Dedication.

you'll throw away an hour in Reading this Book, it will be the only hour you ever spent unaccountably. Tho' I ought to be apprehensive of your Judgment, yet I have great confidence in your Candour; and hope, that from the number of so many witnesses of your obliging Disposition, you'll not exclude

Sir,

Your most Obedient  
Humble Servant,

John Purcell.

---

TO



TO THE  
READER.

**T**HE Taste of this Age is so very different, that what one commends, another will certainly blame: And there are some who make it their *business*, to Censure and Condemn every thing at its first appearing, let it be what it will, thinking, that like young Travellers, they should shew their Ignorance, if they admired what comes new to them.

In all Sciences nothing now pleases the Generality, but what is altogether conformable to Modern Philosophy; and again, there are almost as many who condemn whatever deviates from the Paths and Foot-steps of the Ancients. To please all Men is absolutely impossible; and I am so far from imagining I have  
done

## The Preface.

done it, that I expect more Criticks upon this small Treatise, than upon any Book of its kind which has come out these many Years: Besides the general ones, I expect the particular Censure of two sorts of Men; The first are, the *Galenick Old-fashion'd Doctors*, who explicate all things by *Hidden Qualities*, which give others just as clear an Idea of what they would explain, as they themselves have of the true Mechanism of Man's Body, which they know nothing at all of; but these I fear not, all the Learned of this Age are sufficiently convinc'd of their Errors, and 'tis long since that all these *Occult Qualities* have been banish'd from *Minerva's School*; and nothing is now acceptable, but what is explain'd Mechanically by Figure and Motion. The second are our *Modern Physicians*, who though they are convinc'd that the Body of Man is a Machine, which is acted all by inward Springs and Motions, yet may think it Arrogance for a young Physician to pretend to explain them by other Notions than what Ingenious *Willis* and his Followers

## The Preface.

lowers have deliver'd to us: But I must beg their pardon if I lay aside his, to ground my self upon the more solid and rational Principles of that Penetrating Philosopher Doctor *Chirac* Professor of Physick in the University of *Montpellier*, to whose Works (which will shortly be publish'd) I referr them, to be convinc'd of the Solidity of those Principles, which the brevity this Treatise requires, will not permit me to establish.

As for those Ingenious Gentlemen who are well vers'd in Modern Philosophy, Geometry, and the Structure of Mans Body, 'tis them I'd chuse to be my Judges. And I hope the Fair Sex (for whose benefit this Book was chiefly design'd) will, in requital of my Labour, excuse the Impoliteness of my stile, and some hard words, which the subject render'd impossible for me to avoid.

This I can say, that several of the most eminent Physicians in *England* have not dislik'd this Book, after which, let every Man make his severest Censures on me; provided I have



## *The Preface.*

have in this Treatise, contributed any thing to the better Discovery of the Causes and Cure of this Disease, I have obtain'd my Ends ; which are, to have been something beneficial to the World in a Distemper which so generally afflicts Human-Kind ; and not to have spent my Days in an Idle Sloth altogether unprofitable to my Native Country.

*Of Vapours* 1

and representation of almost all Di-  
seases. And though several Au-  
thors have written on this Subject, I find  
none, who have considered it with  
that serious Attention, which is re-  
quisite for the perfect Discovery of  
its Cause and Symptoms of such  
a kind of Vapour, as is usually the  
Fountain of the common Fate of  
Inventors, not to bring his Inven-  
tion to light, but to keep it in obscu-  
rity, and with many times  
more Reason, backed by Experience,  
and Force of Logic, to support them.

# TREATISE

O F

# Vapours.

## CHAP. I.

### *The Symptoms and Acci- dents of Vapours.*

**V**apours, otherwise called *Hysterick Fits*, or Fits of the Mo-  
ther, is a Disease which more  
generally afflicts Humane Kind, than  
any other whatsoever; and Proteus-  
like, transforms it self into the shape

B and

and representation of almost all Distempers. And though several Authors have writ on this Subject, I find none, who have considered it with that serious Attention, which is requisite for the perfect Discovery of the Causes and Symptoms of such a Distemper. Ingenious *Willis* [who put us in a way of explaining Mechanically the Functions of Man's Body, but had himself the common Fate of Inventors, not to bring his Work to Perfection] grounds a Systeme upon his own Notions; which, though plausible and witty, yet many times want Reason back'd by Experience, and Matter of Fact, to support them. Practical *Sydenham* flights Reason, relying totally upon Experience; and does not reflect, that it is Study and Reason that must find out the Causes of Distempers, and their Cures. *Riverius* had much Learning and Experience, but wanted those great lights into Nature, which Anatomical and Philosophical Discoveries in these our days have given us. And since we have both the benefit of their Writings, and of all new Discoveries, we hope



## *Hysterick Fits.*

3

hope to give more Satisfactory Reasons for what shall be advanc'd, than those Authors could who wanted these advantages we have. My design is, first, to number up all or most of the *Symptoms* and *Accidents* of this Disease: Next to seek out the *Causes* that are capable of producing them; and having Established them, to proceed to explain Mechanically the manner how they produce them: Then to speak a word or two of the Distempers which this *Prognosticates*, and Leads to: And lastly, to treat of its *Cure*.

Those who are troubled with *Vapours*, generally perceive them approach in the following manner; first, they feel a Heaviness upon their Breast; a Grumbling in their Belly; they Belch up, and sometimes Vomit, Sower, Sharp, Insipid, or Bitter Humours: They have a Difficulty in breathing; and think they feel something that comes up into their Throat, which is ready to Choak them; they Struggle; Cry out; make odd and inarticulate sounds, or mutterings; they

B 2

perceive

and representation of almost all Distempers. And though several Authors have writ on this Subject, I find none, who have considered it with that serious Attention, which is requisite for the perfect Discovery of the Causes and Symptoms of such a Distemper. Ingenious *Willis* [who put us in a way of explaining Mechanically the Functions of Man's Body, but had himself the common Fate of Inventors, not to bring his Work to Perfection] grounds a Systeme upon his own Notions ; which, though plausible and witty, yet many times want Reason back'd by Experience, and Matter of Fact, to support them. Practical *Sydenham* slights Reason, relying totally upon Experience ; and does not reflect, that it is Study and Reason that must find out the Causes of Distempers, and their Cures. *Riverius* had much Learning and Experience, but wanted those great lights into Nature, which Anatomical and Philosophical Discoveries in these our days have given us. And since we have both the benefit of their Writings, and of all new Discoveries, we  
hope

## *Hysterick Fits.*

3

hope to give more Satisfactory Reasons for what shall be advanc'd, than those Authors could who wanted these advantages we have. My design is, first, to number up all or most of the *Symptoms* and *Accidents* of this Disease: Next to seek out the *Causes* that are capable of producing them; and having Established them, to proceed to explain Mechanically the manner how they produce them: Then to speak a word or two of the Distempers which this *Prognosticates*, and Leads to: And lastly, to treat of its *Cure*.

Those who are troubled with *Vapours*, generally perceive them approach in the following manner; first, they feel a Heaviness upon their Breast; a Grumbling in their Belly; they Belch up, and sometimes Vomit, Sower, Sharp, Insipid, or Bitter Humours: They have a Difficulty in breathing; and think they feel something that comes up into their Throat, which is ready to Choak them; they Struggle; Cry out; make odd and inarticulate sounds, or mutterings; they



perceive a Swimming in their heads ; a Dimness comes over their Eyes ; they turn pale ; are scarce able to stand ; their Pulse is weak, they shut their Eyes ; Fall down ; and remain senseless for some time ; afterwards by little and little, their Pulse returns ; their Face regains its natural colour ; their Body grows hot as before ; they Open their Eyes, Sigh, and by degrees comes to themselves.

Some moreover have their Bellies swell'd and stretch'd like a Drum ; their *Hypochondria's* distended ; and they fancy they feel some part within them rowl from place to place ; their Pulse is almost imperceptible ; they feel a violent Cold run up their Backs, which afterwards strikes through their whole Body ; their Head-aches ; and sometimes there ensues a Palpitation of the Heart, and a Fainting away. There are many who when these Accidents are over, come quietly to themselves by degrees ; and in others, when the violent Cold is ended, a no less violent Heat succeeds ; which casts them again into many of the former Accidents,

## *Hysterick Fits.*

5

dents, as Palpitation of the Heart; Head-aches; Giddiness; Difficulty in breathing; and into some new ones, as Flushing of the face; Raving; Convulsions; Foaming at the mouth; Violent Beating of the Muscles and Arteries; and a Tingling Sensation in the Thighs, which were Paralitick during the Cold fit; nay sometimes the Palsy will continue in the Hot Fit too. Sometimes the Cold, with which the fit begins is hardly perceptible, and then the Patient has no remarkable Accidents whilst the Cold lasts; but when the Hot fit comes on, it is accompanied with several of the above-numbred Accidents; but the Pulse beats higher and quicker than in the foregoing state: And if no Coldness was to be perceived at all, before the Hot fit, then many of the same Accidents will happen, but in a more violent degree, and the Pulse is still more frequent and beats higher.

Sometimes the Patients in this distemper fall into such violent Fits of struggling that they can hardly be held; they Mutter odd and inarticulated Sounds, Foam at their Mouths,

B 3

and

and Knock their Breasts. Others suffer such violent and long continued contractions of the Diaphragm and Intercoſtal Muſcles, that their Breast and Lower Belly remain elevated for a long time together, ſo that they cannot draw their breath all that while; nay, ſome have layn for three whole days without the leaſt ſign of breathing that could be perceived by thoſe that were about them.

One complains of a violent Pain on the top of her Head, which Sydenham calls *Clavus Hyſtericus*, and it is frequently accompanied with Vomiting.

Another is troubled with a Pain under her Heart, and a Reaching to Vomit; or Vomits a mixture of Porraceous and Cholerick Humors; and it ends in the *Jaundice*.

A third lyes with her Jaws preſs'd together with all the violence imaginable, and her Noſtrils drawn together ſo cloſe that ſhe is in danger of being Suffocated; and ſometimes remains for a conſiderable while as if ſhe were dead.



## *Hysterick Fits.*

7

A Fourth, upon the Smell of Civit, Musk, Amber, or any such Sweet Scent, shall fall into Fits.

A Fifth, shall be molested with them, upon any Anger, Passion or disturbance of Mind, which is immediately followed with a great quantity of pale Urine.

A Sixth is very Thoughtful, Blushes, or grows pale on a sudden, has a deprav'd Appetite, sometimes to Craving, at other times Loathing all sorts of usual Meats, and is pleased only with the eating of Trash, as Chalk, Charcole, &c.

A Seventh will on a sudden fall into extravagant Fits of Crying, or Laughing, without being provok'd by any External Cause.

Besides all these, several other Accidents happen to People troubl'd with this Disease ; as a Pain in the Bladder and Kidneys, like that of the Stone and Gravel ; violent Chollicks ; Swellings in the Jaws, Shoulders, Legs, Hands, or Thighs, which yeild not to the finger that presses them, nor retain any mark : A Pain in the Back which all feel more or less, as also in

several parts of the Body, so violent that the place affected cannot endure touching for a long while afterwards; they Breathe short and with pain; Yawn and Stretch; their Sleep is disturb'd; and their Dreams are frightful; their Eyes are fix'd and staring; sometimes they remember what happened in their Fit, sometimes they do not; they Cough without intermission; Spit thin, and in vast quantities, for several weeks, as if they were in a Salivation; with many other Accidents which shall be mention'd in their due place.

Lastly, we observe that those who have labour'd long under this Distemper, are oppress'd with a Dreadful Anguish of Mind, and a deep Melancholly, always reflecting on what can perplex, terrify, and disorder them most; so that at last they think their recovery impossible, and are very angry with those who pretend there is any hopes of it: The least Contradiction to their will casts them into violent Passions; they are Fickle, Wavering, and Unconstant, now resolving on one thing and immediately changing

changing to something else, which they presently quit; and indulging their Distemper, they decline all diversions.

Note that all these Accidents do not happen to every one that has *Hysterick Fits*, or the *Vapours*; but some to one, some to another: This Person shall be molested with a great many; That, with but a few: and it suffices that any two, or three of them return by Intervals, to have them term'd *Vapours*.

It is also to be observed that this distemper comes by Fits, and has its Intervals like an Ague, tho' the return be not exactly Periodical, and that in every *Paroxysme* the same Accidents happen, as did in the preceedent, provided the Patient committed no excess in the Interval.

## CHAP.



## CHAP. II.

*The Causes of Vapours.*

HAVING in the precedent Chapter treated of the many *Symptoms* and *Accidents* of this Distemper, I shall endeavour, in this, to lay open the true *Causes* thereof; and since many Eminent Authors assign Different ones; the surest way of discovering the Truth is *Analytically* to examine, what there is in a Human Body capable, and what incapable of producing these Effects.

In the first place, it is Demonstrative, that what we call the *six non-natural Causes of Distempers*, (viz the *Air* we breath; our *Meat* and *Drink*; *Sleep*, and *want of Sleep*; the *Motions* and *Repose of our Body*; the *Retention* or *Evacuation* of its *Recrements* and *Excrements*; and the *Passions of the Mind*;) are none of them the Immediate cause of this Distemper, since the *Paroxysm* often happens when these affect the Body no otherwise than

Not the six  
Non-natural  
Causes.

## Hysterick Fits.

11

than they did in the Interval ; during which time, nothing happened like to what we observe in the Fit.

Secondly, The *Solid parts of Mans* <sup>Not the solid parts of the body</sup> Body cannot be said to be the cause of this Distemper ; their Organization rendering them incapable, of producing any Alteration, or Depravation of the Functions of the Body, without the concurrence of some of its *Fluid parts*.

Thirdly, That the Original cause of this Disease does not lie in the Blood, I prove thus ; it is an undeniable *Axiom*, that, every thing remains <sup>Not the Blood.</sup> in the same state it was in till it receives some New Motion or Alteration from some other Body ; consequently the Blood must remain in the same State and Condition it was in before the *Paroxysm*, unless some other Body causes a new Motion and Alteration in it, therefore it is that other Body, not the Blood, which causes these Fits ; moreover they do not continue from their first coming on, without intermission, as in continued Fevers ; but seize the Body by Intervals, or at least, in the Intervals do not operate with the same violence as during

during the *Paroxysm*: From hence I conclude, that if the cause lies in the Blood, it must have some time to be form'd and collected in a sufficient quantity ; (during which time, if you please, the Symptoms are more remiss.) which being done, it takes yet some time more to digest it self, then it ferments, and mingles with the whole Mass of the Blood, and produces these Effects. But let any thinking Person weigh seriously with himself how it is possible, that an Acid salt of such a fixed Nature as is requir'd to cause a *Shivering Cold* through the whole Body, should gather together in such a *Heterogeneous* Liquor as the Blood is, which consists all of such Particles, as ferment, attenuate, and Volatilise themselves without intermission. Again, if the cause lies in the Blood, why does it not sooner disengage it self from it, and produce its effects when the Blood is in a Fever, or violent Fermentation, than when it is in a moderate one, as most frequently happens just before the *Paroxysm*? And since it may be objected that there is no such thing as

Fix'd



Fix'd Acids, because by the force of fire all Acids can be rendr'd Volatile. I would have the Reader know I consider them here in another nature; that is in regard of the effects they produce, and that I term those Acids *Fix'd* which do constantly coagulate the Blood and other Sulphurous Liquors, such are *Vinegar*, the *Juice of Lemons*, &c. and those Acids *Volatile*, which ferment these Sulphurous Liquors, such are the *Spirits of Vinegar*, the *Spirits of Pismires*, &c.

Fourthly, neither the *Spirits*, the *Lympha*, the *Gall*, the *Pancreatick Juice*, the *Ferment of the Guts and Stomack*, nor any of the other *Recrements* which are seperated in Mans Body, can be assign'd as the *Adequate cause* of this Distemper, since they enter continually into the Blood, and consequently would produce these Accidents without intermission. Besides, these Liquors are seperated from the Blood, and by consequence have nothing in them, but what was contained in the Blood, and I have already shewn, that the Blood could not contain such fix'd Acid salts in it, as  
cause

cause the shivering Cold in this Distemper.

Not the  
Womb.

The Ancients assign'd the *Womb* as the cause of *Vapours*, and Ignorantly fancy'd it rose up into the Throat, but every one, who has the least knowledge of Anatomy, is convinc'd how impossible that is, for (besides the Ligaments wherewith the Womb is ty'd in the Lower belly,) the Situation of the *Diaphragm* and other parts contained in the Chest and Belly, renders its Rising up to the Throat impossible.

Nor Vapours  
rising  
from the  
Womb.

Others who ground themselves more upon Authority, than Reason and Experience, assert, that tho' the *Womb* cannot rise up into the Throat, yet it is the Cause of this Distemper by collecting *Vitious and corrupted humors in its Cavity*, which it sends in Fumes up to the Head and so produces the many and various Accidents, which afflict the Patients. To these I answer, that supposing such *Corruption and Fumes* were engendred in the *Womb*, they would sooner vent themselves downward, by its inward orifice, than mount up through so many

many Membranes, Muscles, &c. through which there is no Passage to the Brain: besides we see, that in Cancers and Ulcers of the Womb (which make that part the very sink of the Body) none of these Accidents happen; and in the Dissection of the Cadavers of Women, who were constantly afflicted with this Distemper, I never yet found any one that had any Corruption or Ulcer in the Womb, and the most experienced Authors and Anatomists do affirm, it seldom happens.

Some pretend that the Cause lies in the Brain, and that Vapours are nothing but an Epilepsie. Indeed the Symptoms of these two Diseases are so very like, that I should not contradict any one that calls them by the same name, however I do not think the Cause either of Vapours, or of Epilepsies, (at least those which are called Sympatbetick,) lies in the Brain; for if there be an Ulcer or what else you please in the Brain, from whence Heterogeneous Particles Exhale and Mix themselves with the Spirits, and by exciting a fermentation in them, cause

*Nor is the disorder of the Spirits the adequate cause*

all



all the Accidents of *Hysterick Fits* ; How comes it to pass, that the same cause still being present, the same Effects are not constantly produc'd ? I mean why do not the Symptoms of this Distemper afflict the Patient without intermission ? Moreover this cause is unproportion'd to the effects produc'd ; for it is not an easy matter to explain how these Heterogeneous particles Disturbing the Spirits in the Brain can cause a *Heaviness on the Breast*, a *Grumbling in the Guts*, a *Belching of Sower, Sharp, or Insipid Fumes*. I suppose it will be said, that they disorder the *Economy* and Regular Motion of the Spirits, and make them flow irregularly into various parts of the Body ; that when they flow thus into the Guts, they cause violent contractions in them, from whence proceeds their Grumbling ; and when they flow towards the Stomach, they cause the Patient to *Vomit*. To this I answer, That granting the Perturbation excited in the Spirits, does cause them to flow irregularly and in greater quantity into the Guts, their Effect can only be, a swifter  
*Peristaltick*

*Peristaltick Motion* in them, but no ways the *Grumbling*; which can only be excited by *Crudities* and *Indigestions*, which rarify themselves into Air, and rowl up and down in the Guts. Again, in the Fits they belch up Sower, Sharp, or Insipid Fumes; and granting this *Perturbation of the Spirits* causes the Convulsion which brings them up, no one will pretend that their inordinate Motion can create Sower or Sharp Humours in the Stomach, since they are incapable themselves of contracting any *Acidity*: and if they are capable of producing this effect, why do they not every time their motion is more violent and inordinate, by *Passion*, or otherways, produce such Sower, or Sharp Humours? And why are these Fumes of so different a nature, not only in different Persons, but also in the same Persons, at different times, since they are produc'd by the same Cause which still operates in the same Manner, that is, which gives an Irregular and Inordinate Motion to the Spirits? Again, What Reason can be given for the Cold which Seizes the whole Body?

C

For

For we find by experience that a violent motion of the Spirits has a quite contrary Effect, and sets the Blood on fire. Another Reason, and that a very strong one too, to prove that the *Perturbation of the Spirits* is not the *Fundamental Cause of Vapours*, is drawn from the nature of the Remedies which all Physicians, even the very Authors and Asserters of this Opinion, prescribe in this Disease: *Viz.* Steel Medecines, Spirit of Salt Armoniack, Spirit of Urine, &c. which we know are so far from abateing and quelling the violent Motion of the Blood and Spirits, that on the contrary it is known by matter of fact that they augment their Fermentation and Ebullition: 'Tis true they order *Anodyne* Medecines, and *Narcoticks* in Frensies, Raving and violent Convulsions, thereby to allay the present Symptoms: But always prescribe *Steel* Medecines (which they themselves own, exalt the ferment of the Blood and render it more Spiritous) to eradicate the cause of the Dissemper.

Therefore



Therefore since none of the above-mentioned Causes can be admitted, it remains that the true cause must reside in the *Stomach* and *Guts*; where- of the Grumbling of the one, and the Heaviness and uneasiness of the other generally preceeding the Paroxysm, are no small proofs.

Now let us examine what there is in them that can produce these Effects.

First, It is not the *Chyle*, for that daily enters into the Blood, within half an hour, or little more, after our Meals, and yet the Fit does not happen after every Meal, nor every day; besides that it comes upon them, when they have been a long time without eating. *Not the Chyle.*

Secondly, Neither the ferment of *the Guts*, and *Stomach*, nor the *Gall* or *Pancreatic Juice*, which pass in- to the Duodenum, to Elaborate and purify the Chyle, (of which they make a part and do daily, if not hourly enter into the Blood) can of themselves; as I have already shew'd, be the Cause of these Accidents. *Not the ferment of the Stomach, nor the Gall, &c.*

Nothing else is to be found within the *Stomach*, and *Guts*, capable of

The true  
Causes are  
Crudities  
and Indi-  
gestions.

producing these Symptoms, unless it be the *Aliments* we take. But these we know, when well concocted and digested, are so far from producing any ill Effects upon Man's Body, that they alone sustain and preserve it in a capacity of exercising its Natural and Animal Functions : however, if they, by any vitious Concoction, turn into *Crudities*, and *Indigestions*, then their Laudable qualities are chang'd into quite opposite ones, and they produce the many Accidents and Symptoms of this Distemper : for when, by the Vitious Qualifications of the ferment of the Stomach, the *Aliments* are not well digested, they turn into *Crudities* ; these *Crudities* by little and little gather together in the Wrinkles and Folds of the Stomach, and Guts ; where they lie for some time without much sensible motion or fermentation within themselves ; till at last by the Heat of the circumjacent parts, their grosser salts are divided and put in motion ; which Fermentation is augmented by the various Juices that flow into the Guts, from the many Glands which are placed in the Lower Belly ;  
and

and by this means, they are so dissolv'd and liquify'd, as to enter by the *Milky Veines* into the Blood, where they produce all these Accidents, which I shall derive from this Cause, and account for Mechanically in the following Chapter.

And as I just now drew an Argument from the Nature of the Remedies that cure *Vapours*, to prove that the *inordinate Motion of the Spirits* was not the *Adequate Cause* of this Disease, but only the immediate one of some particular Accidents of it: So here I take a very convincing Argument, from the Nature of the same Remedies, to establish the cause I assign: Because only *Steel Medicines*, which are proper to divide the tough glutinous Sulphurs of the Blood, and to Ferment, Volatilize, and render it more Spirituous, can Effect an entire Cure. Which makes me wonder how so many Ingenious Authors, could act so contrary to their Reason, in prescribing Remedies they knew would have a contrary Effect, to that of abating the violent Motion of the Blood and Spirits; or Reason so con-



trary to their own Experience, whereby they always found that nothing could ever make a perfect Cure of this Distemper, but what divided, attenuated, and Spiritualized the Blood, as it is the nature of *Steel Medicines* to do.

*The Remote Causes,*

Indigestions then are the *Principal* and *Adequate Cause* of *Vapours*: The *Remoter Causes* are the abuse of one, more, or all of the *Six Non-natural Causes* of Distempers, which being either unwholsome in their own Nature, or communicated to the Body in an undue proportion, change the Natural Constitution of the Blood, into a Crude, Acid, or Glutinous one; and consequently the Ferment of the Stomach, which is separated from it, partakes of the same Vices; and thereby is rendered incapable of digesting the food into wholsome *Chyle*, but converts it into *Sower Crudities*, which remaining in the Stomach and Guts, produce this Distemper in the foresaid manner.

It is to be remark'd that these Indigestions are not always of the same Nature; but that in some they are  
*Sower,*

*Sower*, in others *Rough and Harsh*, *Nitrons*, or *Inspid*; and it is from this Diversity of *Crudities*, and their different degrees of *Fixness* and *Volatility*; and the various Constitutions of the Blood, that this Distemper is attended with so many different Symptoms and Accidents.

And since it is impossible to number up all the different Constitutions of Men; which tho' generally divided into four, yet admit of as many Subdivisions, as there are individual Persons; (there being not two Men alive whose Constitutions do not vary in some measure;) It is impossible to assign the difference that every Temperament causes in this Distemper. However I shall take notice of three differences which are most remarkable in it; the others may be explain'd by a Constitution of Blood more or less *Volatile*, or *Fixed*; and by a greater or lesser quantity of the *Crudities*, which must also be considered in regard of their *Fixedness*, *Volatility*, *Sharpness*, or *Sowerness*.

The first is a Thick, Gross, Glutinous Texture of the Blood, very

difficult to ferment ; such is the Constitution of those, who after a sensible and great Cold thro' all their Body, return to their Natural Heat, without any augmentation thereof, or Feverish Disposition. And as for the *Crudities* in this case, they always abound with *Fixed Acids*, being either very Sharp and Sower, or Rough and Harsh, as the Patient will inform you, by the Taste she has of the fumes she belches up ; and in those who do not belch at this time, it is demonstrative by the Effects produced ; since nothing but *Fixed Acids*, or Humors of a Rough Harsh Taste, are capable of coagulating the Blood to such a degree, as is requisite to cause a general Chilness throughout the whole Body ; and it is matter of fact that nothing but *fixed Acids*, Mix'd and Combined with Elementary Earth can cause the harsh Savour they often perceive in the fumes they belch up.

The second is a thick Texture of Blood ; through which nevertheless the Salts, after some struggle, do yet  
loose



loose and ferment: such is the Constitution of those, who after a Chilness, fall into a considerable Heat. In these it is manifest, the Crudities are of a fix'd acid Nature, (since they feel a Chilness) tho' not so fix'd as in the precedent case. This differs from the former, but in a lesser Fixation of the Salts, and easier division of the sulphurous Particles of the Blood, as also in a *lesser Fixness* of the Crudities which cause the Distemper.

The Third, Is a Constitution of the Blood which abounds in Volatile Salts, ready to ferment on all occasions, and whose Sulphurous Particles are very open, and much divided, so so as not to hinder the easie Confluence of these fermenting Salts, and the Fumes they belch up, are generally of an Alkaly nature, and not very fix'd: Such is the Constitution of those who fall into these Fits upon the smell of *Musk, Civet, Amber*, or by any *Passion*; and of those whose Fits begin with a Heat, without any Chilness preceding. Now we know, that nothing can ferment the Blood so on a sudden but *volatile Alkalys*, or *volatile Acids*: And  
since

since we find by experience, that these Persons generally belch up such Crudities as are known by their taste to abound with Alkaly Salts. Therefore I conclude, that in this Constitution, the Crudities which cause the Paroxysms, are of an Alkaly nature, and not so fix'd as in the precedent Constitutions.

And here I would have you take notice, first, That when I assign such a different nature of Fumes to these different Constitutions, I talk of what most generally, not what always, happens; for I am not ignorant, that sometimes a Patient, not only in different Paroxysms, but in one and the same, shall belch up very sower, or harsh rough Fumes, which immediately, upon some Perturbation of Mind or Body, will be succeeded by Fumes of a quite contrary favor.

Secondly, That when I say, the Crudities are of an Alkaly nature, and not very fix'd, I do not thereby pretend, that whenever these Accidents happen, 'tis an evident sign of such Indigestions in the Stomach; for I know very well, that several of these Accidents may and do daily happen to Persons

Persons of a looser Texture of Blood, upon the bare Smell of Civit, Musk, Amber, &c. without having ever in their lives been troubled with Vapours. But I think in this case, those Accidents ought not to be term'd Vapours, as wanting an Essential condition, which is a permanent cause producing these Effects by Intervals.

It remains, that I explain how these Crudities cause the Fits to come by *Why this Disease seizes by Intervals or Paroxysms.* Intervals; for it is matter of fact that they discontinue for a Week, a Fort-night, &c. and then return. If therefore Indigestions are the cause of this Distemper, it is evident, that during the Interval, they either change their nature, or that there is no more of them left, at least in a sufficient quantity to continue the Fit. Now it is not probable that they change their nature, since within a few days the self-same Accidents will return again. Shall I say that there is not a sufficient quantity, and that there is requir'd an Interval to gather together so many Crudities from the Indigestions, as may suffice to produce these Effects? But that cannot be asserted neither, since we find



find, that the *Smell* of *Civit*, *Musk*, *Amber*, or any *violent Passion*, nay sometimes the *drinking a Glass of cold Water*, brings immediately the *Fits*; which makes it plain, that the Cause is generally, if not always, present, in a sufficient quantity to bring on the *Paroxysm*. But the reason why it does not continually produce these Effects, is, that the *Crudities* being of a fixed nature, require a certain time to digest, ferment, and become liquid, to that degree, which is necessary to render them fluid enough to enter by the *Milky Veins* into the Blood: and a clear proof, that after their Accumulation, they require a certain space of time to digest and commence an intestine Fermentation, before they can be Liquify'd by the various Juices which are daily, if not continually, powred upon them, is, that if in this Distemper (as it is more easie to be observed in intermitting *Fevers*, the return of whose *Paroxysms* is more certainly known to a prefixed time) you give the Patient a Glass of Water, or any other Liquor, half an hour, or an hour, before the *Fit* uses to return, you advance it, and make it far

far more violent; and the reason is, because the Crudities, which occasion the *Fits*, being digested and fermented, almost as much as is requisite to produce their usual Effects, this Liquid helps to ferment and dissolve them so much the sooner, and serves as a Vehicle to carry more of them into the Blood; whereby (as it is plain) the Symptoms will come sooner, and be more violent: but if one drink the same quantity of Liquor ten or twelve hours before the *Fit*, nothing ensues thereupon, because the Crudities remaining in their fixedness, have not yet advanced their intestine Fermentation to such a degree, that the Liquor can act upon the Salts, so as to dissolve and carry them into the blood. Now to tell infallibly at what hour the *Paroxysm* will come, and what *Symptoms* it will produce, it is necessary to know first, what degree of Coagulation these Crudities have: Secondly, The Mass of the Particles which are to ferment: And Thirdly, What quantity of movement it is, that puts them in motion: Which being impossible to be known, it will suffice

suffice to say, that these Crudities being gathered together in the Stomach and Guts, do digest sooner or later, according as they are more or less fix'd, and by the concurrence of the various Juices which are powred into the Guts, they on a sudden ferment, liquify, and enter by the *Milky Veins* into the blood.

We have several Examples of this sort of *Fermentation*, both in liquid and solid bodies, which remain for a considerable time without any perceptible motion, and on a sudden ferment in the most violent manner. So *New Wine* stands for a considerable time without the least appearance of fermenting; and on a sudden rarifies it self so violently, that it will burst the strongest Vessels, if it has not vent given it. So we see a *Stack of Green Hay* remain for a long while without any sign of alteration, and on a sudden break out into a flame. And to convince you, that it is the nature of *Salts* and *Humours contained in Mans Body*, (as well as of things foreign thereunto) be they never so fix'd, to break out at last into a *Fermentation*



*tion* and *Dissolution*; do but reflect that most of the *hardest Tumours* which rise on Man's body, tho' they remain sometimes two or three Months, or longer, without the least sign of fermenting, do at last of themselves (if left alone) dissolve and suppurate.

And tho' I have assigned *Crudities* to be the cause of this Distemper, I do not deny but that it is often produced by *Obstructions*: but even then Indigestions and *Crudities* are the more immediate causes; for when by the abuse of any one or more of the fix non-natural causes of Distempers, *Obstructions* are occasion'd, whether in the Womb, Liver, or elsewhere; the Retention of that Recrement causes an union of its Salts with the Blood, and consequently with the Ferment of the Stomach, which is separated from it, which being thereby vitiated, creates Indigestions and *Crudities*, whence this Distemper arises.

Note also, that when I say *Crudities* are the cause of this Disease, I do not deny but that it is *the Disorder of the Spirits*, which immediately causes the *Convulsions*, and several other accidents, *The Disorder of the Spirits, is the immediate cause of some Accidents, but not the adequate cause of the Distemper.*

dents. However, I think that *Crudities* ought to be look'd upon as the *Principal* and *Efficient Cause*, and this Disorder of the Spirits, and the Symptoms it produces, only as *Effects* which flow from them.

*Why Women are more subject to Vapours than Men.*

Now the reason why Women are more subject to it than Men, is first, because their *Menses* are a Recrement more subject to Obstructions than any other : Secondly, because they eat more Odd, Indigestible, sugar'd, spic'd and Salt Meats. Thirdly, because they are more subject to violent Passions, and more deeply affected by them than Men. And lastly, the still and unactive Life they lead, contributes much thereunto ; for you will seldom see Women inured to Labour and Sweat, troubled with this Distemper : besides, the least Squeamishness or Head-ach which molests them, is termed *Vapours*.

# CHAP. III.

## *A Mechanical Explanation of the Symptoms, and Accidents of Vapours.*

**I**N the Foregoing Chapter, I have assign'd and explain'd the Causes of this Distemper : In this I shall give a Mechanical Explication of its Symptoms and Accidents.

And to commence with what most generally happens at the beginning of the Fits; the Heaviness which they perceive on their Breast, towards the Stomach, is occasion'd thus : The Crudities being enter'd into the Blood, the fix'd Acid Salts with which they abound, do interwave themselves with the Sulphurous and Lymphatick parts thereof, by which means they coagulate the whole Mass, and consequently render it obnoxious, to obstruct

*Heaviness on the Stomach.*

D



frustrate its own course of Circulation : which is more apt to happen in the Lungs than any other part of the Body ; because they are of a slack and loose Composition ; and therefore the Blood loses more of its Motion in them, than it does in any other part of the Body through which it circulates ; by which loss of Motion, the Blood becomes less Fluid, and stops in several windings of the Veins and Arteries. Now, The Blood which is continually forced from the right Ventricle of the Heart into the Lungs, not finding as usually a free passage thro' them, nor a way to return into the Heart, ( being hindred by the *Valvula Semilunares*, which in the *Diastole*, shut up the *Arteria Pulmonaris* ) distends, and stretches the Arteries, whereby the Vesicles of the Lungs, are pressed into less compass ; so that they cannot admit of the usual and requisite quantity of Air ; for want of which, the Blood is still more coagulated, stops, swells, and distends the Arteries more and more, which cannot happen but that at the same time, the Nerves of the Lungs, must  
either

either be distended, or pressed by the coagulated Blood ; whereby the Spirits flow up to the Brain with such a Motion, as by the *Establis'd Laws of the Soul and Body's Union*, is always accompanied with the Feeling of Heaviness.

And here I would have you remark, that all *Sensation* whatsoever, is nothing but a *Perception of the Soul*, occasion'd by the Spirits flowing from any particular part of the Body to the Brain, by reason of an impression from some adventitious cause ; which tho' not demonstrable in it self, because we cannot prove how a Material Body, can have any effect upon an Immaterial Essence or Spirit, as the Soul is ; yet seeing that on the occasion of this Reflex, and Motion of the Spirits, such a Sensation is always rais'd ; it is on very good grounds we affirm that the God of Nature, has united the Soul to the Body, with such Laws, that whenever a Reflex of the Spirits to the Brain happens, then the Soul should be affected with a Sensation, correspondent to that Part, from whence the Motion began : And dif-

ferent Sensations consist in the different Motion, and Reflux of the Spirits from each part to the Brain. So the Eye is composed of many various Tunicles, and Humours, to moderate the Impression, made by the Luminous Particles upon the *Retina* ( which is an Expansion of the Optick Nerve ) in such a manner, as shall make the Spirits flow up to the Brain, with that regulated Motion, which is Establisht to cause the *Sensation of Seeing*. Again, we discover such a different Structure in the *Tongue*, and *Ear*, to produce the different Sensations of *Tasting* and *Hearing* : Again, Take a Feather and move it gently over your Lips ; it will cause a pleasing Sensation ; draw it harder, and it will cause a very uneasie Pain ; which shews, that besides the various Structure of different Organs, which causes the differences in Perceptions, which we call the *Five Senses* ; the degree also of Motion communicated to the Spirits, creates another difference, no less distinguishable ; which makes the Sensation pleasing, or troublesome. The *Grumbling of the Guts*, the *Belching*



ching, and sometimes Vomiting of sower, sharp, and the like Humours, will be no hard matter to explain, after having shew'd that Crudities are the cause of this Distemper : For we know that what Salts soever predominate in these Indigestions; they contain other Salts also, which being of a different Nature, do after some digestion, ferment with them ; but by reason that fix'd Acids predominate here, the Fermentation cannot divide and attenuate the Sulphurous parts of the Blood, so much as it is the nature of Volatil Acids, and Alkaly's to do ; but cause a slow, gentle Fermentation, or rather an Expansion, or swelling of the Sulphurs without division ; such as we see in Dough, or a piece of Sea-coal on the fire, before it flames. For the Salts not having force enough to divide and attenuate the Sulphurs, distend, and swell them into a sort of Air capable of Rarefaction and Condensation, like common Air ; which partly by its own Elasticity, and partly by the Contractions of the Diaphragm, and Muscles of the lower Belly, is forced both upwards and

*Grumbling  
of the Guts*

downwards ; that which comes upwards, is what we call *Belching* ; and 'tis fower, sharp, &c. according to the nature of the Indigestions ; that which goes downwards, enters by the *Pylorus* into the Guts, whose cavity being narrower than that of the Stomach, is distended and stretched by these Winds ; thence a Motion is imparted to the Nervous Membrane of the Guts ; from whence, the Spirits flow by little Nerves of Communication, into the Orbicular Fibres, which constitute the third Membrane of the Guts, by whose contractions, these Winds are pressed on a suddain from one place to another, and cause a sound not unlike to that, which Water stopped up in a Vessel will make, when you shake it ; and this is termed *Grumbling of the Guts*.

As for the *Kecking* and *Vomiting*, they are both produc'd by the same cause ; only that in *Kecking*, it acts with less violence : Now the Vomiting is caused thus, the grosser Salts of the Crudities prick and corrode the Nerves of the Stomach, from whence, the Spirits flow to the Brain in great-

er

er quantity; and either by the *Proximity of the Origin* of these Nerves, or by the *Angle of Incidence*, they are forced into the Nerves belonging to the Diaphragm, and the Muscles of the lower Belly, both which contracting themselves, at the same time squeeze the Stomach which lies between them, into a small compass, and so forcibly eject what was contained in it: And tho' some part of these matters goes by the *Pylorus* downwards, yet the far greater share comes upwards; because when the Diaphragm is in contraction, it forces down the Liver, which presses upon the *Pylorus*, or lower Orifice of the Stomach; so that little or nothing can get out that way, but all comes by the superiour Orifice; the violent contraction of the Diaphragm, opening that passage wider than it is at other times.

*The Mechanism of Vomiting.*

Perchance this Explanation will seem something extraordinary to the generality of Physicians, who imagine the cause of Vomiting to be nothing but an *Anteperistaltick* Motion of the Stomach; but that they may



be convinced in this matter, let us examine what happens in Vomiting, and thence try to prove its Cause Analytically.

In the first place, it is matter of fact that in Vomiting, we cast up by the Mouth what was contained in the Stomach. These matters cannot be cast forth, but by the Action of some of those parts which surround the Stomach, and squeeze it ; or because the Capacity of the Stomach is diminish'd by the Contraction of its Membranes ; and however it be still the superiour Orifice must give an easier passage than the Inferiour ; That it is not the Contraction of the Fibres of the Stomack, you will be convinc'd by the following Experience ; first made by that Incomparable Anatomist, and most Celebrated Physician, Doctor *Chirac*, Professor of Physick in the University of *Montpellier*. Give to a Dog *Sublimatum Corrosivum*, soon after the taking it, you will see him make several proffers to Vomit ; and to be the better assur'd, that it is not the Stomach that contracts its self, by an *Anteperistaltick* Motion, so to expel

pel what is contained in it : Make an Incision on the *White-line*, by which you will plainly see, that the Stomach suffers no contraction at all, but that the Muscles of the lower Belly and Diaphragm, do both contract themselves most violently at the same time; then sow up the Incision, leaving only a little Hole to observe the Ventricle through; afterwards set the Dog upon his Legs, immediately he will strain violently to Vomit, and at the same time you may observe violent Contractions of the Diaphragm, and Muscles of the lower Belly, both together : After which he throws up what was contained in his Stomach; when at the same time, keeping your finger upon the Ventricle, through the Hole that was left in the *White-Line*, you will not perceive the least Contraction in it, but only feel your Finger pressed on both sides by the Contraction of the Muscles of the *Abdomen*. Hence I conclude it is not the Contraction of the Stomach, nor its *Anteperistaltick* Motion, which causes the Vomiting. If not that, then it is some of the adjacent Parts which environ

environ the Ventricle ; viz. the Liver, Lights, Guts, Diaphragm, or Muscles of the lower Belly : The *Liver* and *Lights* have no Motion of their own, therefore cannot communicate any to the Stomach : The *Guts* have no other, but their *Peristaltick* and *Anteperistaltick* Motion. The *Peristaltick* Motion would carry these Matters downwards ; and it has been already proved, there is no *Anteperistaltick* Motion in the Vomiting : It is not the Muscles of the lower Belly, nor the Diaphragm singly, because when they move successively one after another, let their Contraction be never so violent, it does not cause a Vomiting ; ( the Ventricle always taking up the place of that Muscle which yeilds) from whence I conclude, that it is caused by the Muscles of the lower Belly, and Diaphragm, contracting themselves both together ; whereby they press the Stomach between them, and so force out what was contained in it. This is matter of Fact, and undeniable to any man, who will take the pains to make the experiment above-nam'd. This I have



have been done four or five times by the Inventor of this Experiment, Doctor Chirac, and have try'd it myself, upon a above twenty Dogs; and constantly found what I here set down. But why do these Muscles, which are *Antagonists* contract themselves both at a time? It must necessarily be, because the Spirits flow into both of them at once, in greater quantity than usually; this change cannot arise unless something new happens to the Body; we observe nothing here, but the taking of *Sublimatum Corrosivum*, the effect of which is an Irritation of the Stomach; therefore, it is from this Irritation that the Spirits flow into these two *Antagonist Muscles* at once. To be fully convinc'd of this, consider, that it is matter of Fact, that upon taking *Sublimatum Corrosivum*, there is felt an Irritation in the Stomach. Now first I know, no *Irritation* can be felt in the Stomach, or elsewhere, unless the Spirits flow from the parts irritated to the Brain. Secondly, that the Muscles cannot contract themselves, but by a greater *Influx* of the Spirits; there-

therefore I am certain, that at one and the same time, there is made a *Reflux* of the Spirits, from the Stomach to the Brain, and a greater *Influx* than usual of them, from the Brain to the Muscles of the lower Belly, and Diaphragm. Thirdly, I know it is the *Irritation* felt in the Stomach which causes the *Reflux*; and that this *Influx* greater than usual could not happen but by a Motion Communicated to the Spirits by some other Body; nothing has happen'd which could impart any Motion to them, but the *Reflux* caused by the *Irritation* of the Stomach; this *Reflux* terminates it self in the same place, (*viz.* the *Emporium of the Brain*) from whence the *Influx* begins: Therefore I reasonably conclude, it is from thence it proceeds. Now this may happen, either because the *Nerves* which belongs to the Muscles of the lower Belly, and Diaphragm, have their Origin in the Brain, close to that of the *Stomachick Nerves*, and so the Spirits which flow out of these latter Nerves, enter immediately into the others; or because the Nerves of these

## Hysterick Fits.

49

these two Muscles, answer to the *Angle of Incidence* made by the Spirits, which flow from the Stomach, whence the Spirits are derived into them. And this I am most apt to believe, because I find, there is such a degree of Irritation requir'd, to cause one to Vomit : For give the same thing, viz. *Sublimatum Corrosivum*, in a small quantity to a Dog, it shall not make him Vomit ; give it in a larger Dose, it will make him Vomit ; and if you augment the Dose which made him Vomit to a triple quantity, it shall not produce that effect in him ; and this I conceive does happen, because the Spirits by their violent Motion, are determin'd to a new *Angle of Incidence*. I know the violence of the Motion communicated, would make no alteration as to the *Angle of Incidence*, if the Body in Motion hit against any thing that is hard ; and that then it would take the same Direction, but with greater violence, and go farther : But the Brain being a soft, supple body, it yeilds to a violent Motion of the Spirits, by which, being stretched



stretched beyond its natural Extent, the Spirits that return from it, are either reflected in an unusual *Line*, or else move confusedly, and disorderly disturb the whole *Emporium*.

I have been something Prolix, in making an *Analytick* proof of this *Phenomenon*; because from this Mechanism, I shall deduce the Explication of several others: Having from hence establish'd, the Communication of the Nerves in the Brain, either by the *Proximity of their Origin and Insertion*, or by their *Angle of Incidence and Reflection*; which is far more Mechanical, than *Willis's Consensus Nervorum*, or their communicating with one another in their *Plexus's*, which is a demonstrable Error; since several of them can be quite disentangled, and it plainly shewn thereby, that these Nerves have no Communication one with another.

Difficulty  
of Breathing.

The Oppression of the Lungs, happenning in the manner above Explicated, it is manifest, that a *difficulty of Breathing* must inevitably follow;

follow ; the Stagnation of the Blood in the Lungs, pressing the Vesicles, so that the Air cannot freely enter.

Sometimes they feel a *Rising in their Throat* ; whereupon, they are almost choack'd ; which happens to those whose Crudities are of a harsh and rough nature. For, as those Fumes rise from the Stomach, they cause an Irritation all up the *Gullet*, and part of them being carry'd into the Lungs, together with the Air that is drawn in, do, as they pass over the *Larynx* irritate the *Aritenoides* ; whereupon they contract themselves, and force down the *Epiglottis*, which shuts up the *Glottis*, so that no Air can enter ; and these Fumes coming up from the Stomach in great quantity, cause continual Irritations, which make as it were one continu'd Contraction for a long while, by which the Air being hindred from entering into the Lungs ; We are affected in the same manner, as when some outward cause presses upon our Throat, so as to hinder us from our breathing : The final cause of this Contraction, is to hinder those Fumes from

*A Rising in the Throat by which they are almost choaked.*

from entering into the Lungs, together with the Air, where they might cause far greater Disorders. For Provident Nature, has so artificially dispos'd all the parts of Man's Body, that every Motion tends to the preservation of the whole Machin ; so that when any Noxious thing presents it self, then that part which is best able to hinder its pernicious effect, puts it self in a Motion to that end : So when we perceive a stroak made at our Head, or any other part of us, immediately, without any deliberate act of our Will, there is a natural promptness in the Mechanical Structure of our Body, that interposes the Hand and Arm, to keep off the Blow from the more necessary parts : So again when anything suddainly approaches too near the Eye, the Eye-lids contract and shut themselves as suddainly, even in despite of our Will : And since our *Senses* were given us for no other end, but to discern what is necessary or congruous to the preservation of our Body, as also to know, shun, and repel what is noxious to it,



it follows that as soon as we perceive this *uneasie Heaviness* upon us, we do our utmost to remove it; which by *Struggling* we do in some manner effect; the frequent and violent Contractions of the Muscles, dividing and attenuating the Blood, so as to make its Circulation more free and easie. But the Soul finding the Body unable, utterly to repel this Evil, and that it is beyond her power to conquer it, she sinks under her Pain and Anguish, and breaks out into *Cry's* and *Groans*; *Cryes and Groans.* thereby to intimate to them that are about us, she wants their Aid, not being able, by all the troublesome Agitation of the Lips and Tongue, to form one distinct word to demand it.

Now when these Crudities have coagulated the Blood, so as to hinder its attenuation into those subtile Particles, which being separated by the *Cortical Glands* in the Brain are term'd Spirits; there is a Deficiency of them, whereupon they run round in the *Emporium*, and cause a *Giddiness* or *Vertigo*. *Giddiness or Vertigo.* This you will not

not clearly understand, till you know how the *Sensation of a Thing's turning round is produced*, which in my opinion, is rather a Judgment than a Sensation: For, supposing a Bowl turns round in your hand; first, it irritates one, then another, and so successively, and almost without intermission, several distinct Fibrils of your Hand and Fingers; which, by consequence, causes a continual Reflux of the Spirits, to so many different Fibres in the Brain, and makes you judge from thence, that the Bowl turns round. For, if those different parts of the Bowl were apply'd one after another, to the same parts of your Hand and Fingers, with the self same degree of Motion, only with this difference, that a longer interval, should intervene between every Application, it would not produce the Sentiment, or Judgment of the Bowls turning round, but several distinct Sensations, of its different Applications to those parts; therefore the Sensation of a Thing's turning round, consists in the judgment which the Soul makes upon

the

the Perceptions, caused by the continued successive Motion of the Bowl, upon different parts of the Hand : And since in the *Vertigo*, every thing seems to turn round, the cause thereof, must first move one Fibril in the Brain, then another, and so successively produce a continued Motion in many of them, to make the Soul judge all the Objects she sees turn round : This happening here without any outward cause, or real turning of the Objects, it is plain, that it must be produced by some inward Cause. *Willis* says it is the *Heterogenius Particles*, which fermenting with the Spirits in the Brain, put them into irregular Motions, and so cause their Circular movement. But if that were true, it would follow, that in all *Raving Fits*, (in which Heterogenious Particles, do undoubtedly mingle with the Spirits in the Brain) the *Vertigo* would happen : And again, that in all *Vertigo's* there would be a *Delirium* or *Raving* ; which not being matter of Fact, it is evident, there must be some other cause, which to find out, we

E 2

must



*How the  
Motion of  
the Spirits  
is caus'd.*

must consider, that in the *System of the Nerves*, there is no *Hydranlick Engine* like the Heart, to push the Spirits by its Contraction, all over the Body ; but that as soon as they are separated by the *Cortical Glands* from the Blood, the Contraction of the *Pia* and *Dura Mater*, together with the Pulsation of the Arteries in the Brain, presses them into the *Emporium* ; where they remain, till by the succeeding Spirits, they are driven on (as one Nail drives another) into the Origins of various Nerves : and when a new Motion is Communicated, by what Cause soever, to any part of these Spirits, they Communicate it to their adjoining Particles, whence it is transfer'd to those before them, and so successively, till the Motion is imparted to the Brain, where it imprints an *Idea* or *Sensation* ; then according to the quantity of Motion which remains, it either terminates in the *Emporium*, or forces the Spirits into those Nerves, which lie near to their Origin, or in their *Angle of Incidence*, whence Contractions

ons of various Muscles ensue : Now suppose by any cause whatsoever, the Spirits should not only not be separated in a sufficient quantity, to drive one another into the Origin of the Nerves ; but in so very small a quantity, as not to fill one half of the *Emporium*, it is plain, that they being of an extraordinary Subtile Volatil nature, will not of themselves press downwards into the Nerves, but tend upwards, according to the Nature of all Volatile Body's : But here, the substance of the Brain hindering the continuation of their direct Motion upwards, they are forced to continue it sideways, and so successively moving round, renew the *Idea's* in the same manner they were imprinted, when we perceived the Objects turn round ; and if at this time, we open our Eyes, all things we look at seem to us to turn round, tho' in realty they do not ; because the Circular Motion of the Spirits in the *Emporium*, hurry's along with it the Spirits which flow to the Brain, by the *Optick Nerves*, which by conse-

quence, instead of making an Impression in one particular place of the *Emporium*, does, in its Circular movement irritate many Fibrils, with a successive, but continued Motion, and makes us Judge that all things we see turn round.

*Proofs of a  
Deficiency  
of the Spi-  
rits in the  
Vertigo.*

This Mechanism, how plausible soever, will not satisfy the Learned, unless I can prove, that at the same time the *Vertigo* happens, there is a Deficiency of Spirits, which I will convince them of by several reasons. For first, they *fall down* in the *Vertigo*, which argues a Deficiency of Spirits in the Erectory Muscles of the Body. Secondly, a *Dimness comes over their Eyes*, and they cannot see, which argues a Deficiency of them in the *Retina* and *Optick Nerves*. Thirdly, it is often preceded by a *cold Sweat*, which argues a Relaxation of the *Sphincters* of the *Miliary Glands*, and consequently a want of Spirits there. Fourthly, immediately before the Fit, they often *Vomit, sharp, or sower Humours*; and it is the nature of such Acid Humours, to fix and coagulate the  
Blood,



Blood, and consequently to hinder the due separation of the Spirits. Fifthly, the *Pulse* is *weak and slow*, an evident sign of the difficulty the Blood has to circulate; and that but little of it coming from the right Ventricle of the Heart, through the Lungs into the left Ventricle, it is powr'd into the *Aorta*, but in small quantity, so as not to distend the Arteries as usually, which is, what we call *weakness of Pulse*: The Pulse is also *slow*, because the Coagulation of the Blood hinders the *Fluidum motivum cordis*, from separating it self in as great a quantity as usually; Hence there is a longer interval between every Pulsation; from whence I gather, the Blood flows but slowly to the Brain, and that being coagulated, but few Spirits are separated from it. Moreover, the Vertigo happens to fearful People, when they look over any Precipice, because in the *Passion of Fear*, the Spirits are retained in the Brain.

The only Objection I know against this *Phenomenon*, is, that the Vertigo often happens to Drunken

E 4

Men,

Men, and those who are in violent Fevers, whose Blood is so far from being in any state of Coagulation, that on the contrary, it is in a preternatural Effervency, and consequently, I cannot argue a want of Spirits there.

To this I answer, that the Blood of these Persons, being in a most violent fervent, it is forced in vast quantities up to the Brain, where it makes an extraordinary distention of the Blood-Vessels, and consequently presses the *Cortical Glands* so, that they cannot filtrate the Spirits, which is the same thing as if the Blood furnish'd none.

And tho' I have just now assign'd the causes of three or four Accidents, by which, I gather'd there is a Deficiency of Spirits in the *Emporium* during the *Vertigo*; yet, since these are Accidents, which most frequently happen in *Hysterick Fits*, it will be expected, I should dilate a little more upon them, and shew in what manner they are produc'd in this Distemper. First then, the *Dimness* comes over their Eyes,

Eyes, that is, they do not see so <sup>Dimness of Sight.</sup> clearly as usually, because the *Optick Nerves* are not sufficiently stor'd with Spirits : Therefore the *Impression* which the visible Object makes upon the *Retina*, cannot be carry'd in its full force along the *Optick Nerve*, up to the *Emporium* of the Brain : And, that because the continuation of the Motion imparted, is here and there interrupted, for want of a sufficiency of Spirits, in the Channel of the *Optick Nerves*; whence it is plain, we cannot have a distinct perception of the visible Object. Another cause of this may be the Waterishness of the Spirits, caused by the Coagulation of the Blood : For, the Spirits being drown'd, as it were, in too great a quantity of Phlegm or Water, lose their Energy, and cannot impress the Idea's of Objects, as usually. The *Weakness* and *Slowness of the Pulse*, happens here exactly in the same manner, as I have just now explain'd it.

The *Closing of the Eye-lids*, is occasion'd by a Deficiency of Spirits, <sup>Closing of the Eyes.</sup> which leaving all parts destitute of their



their requisite quantity, it follows, that of those few Spirits, which flow from the Brain into the Muscles of the Eyelids, the *Orbicular*, which is far the larger, will receive a greater quantity than its *Antagonist*, the *Musculus Rectus* or *Aperiens* of the Eye-lid ; and by consequence, contract it self with a more prevalent force, so that the *Aperiens* cannot open the Eye again. To make you conceive this more plainly, I will ex-

*The Mechanism of the alternative Motion of the Eye-lids.*

pliate to you, in two words, the Mechanism of the Alternative Motion of the Eye lids. The *Underlid* has little or no perceptible Motion, but the *Upper* moves up and down without any voluntary act of our Will ; the Muscle which shuts the Eye is *Orbicular*, and goes round all that appears of the Eye, when it is open : The *Aperiens*, which serves to open the Eyelid, is a strait Muscle, which takes its Origin from the bottom of the *Orbita*, and inserts it self in a strait Line, into the middle of the foremost part of the upper Eye-lid. Now, the *Orbicular Muscle* cannot contract it self, without forcing  
the

the *Aperiens* beyond its natural stretch; therefore, the Trunk of its Nerves is diminish'd, and consequently fewer Spirits are admitted into them, but the Contraction of the *Orbicular* ceasing, the *Aperiens* is no longer extended, but by its own Spring and Elasticity, draws up the *Orbicular*. Add to this, that at the same time, the Spirits which stood crowding at the Origin of its Nerves, but could not enter; now, rush in violently and contract this Muscle, so as to pull up the *Orbicular*; when its Contraction is likewise ended, then the Spirits flow again into the *Orbicular*, and contract it as before; it stretches the *Musculus Aperiens* anew, which partly by its own Elasticity, partly by the Contraction caused by the Spirits, which now flow abundantly into it, prevails over the *Orbicular*, and draws it up; and in this manner they move continually in this Alternate Motion, till either a voluntary act of our Will, or a Deficiency of Spirits, gives the *Orbicular* a superiour force, by which it is kept in a continued contraction;

traction; that is remains, shut. When I say, that a superior force of the *Orbicular Muscle*, hinders the Alternate Motion of the Eyelids, I do not mean that the Spirits flow in greater quantity than usually into this Muscle, and cause a more violent Contraction in it; for in that case, it is clear, it would distend, and stretch the *Aperiens* more than usually; which consequently by its Spring and Elasticity, would draw up the *Orbicular* again; but I mean, that when but a small quantity of Spirits flows into every Muscle of the Body, then the *Orbicular*, as being a larger Muscle, receives more than the *Aperiens*, whereby it contracts it self with a superior force to it; but yet not with violence enough, to stretch and distend the *Aperiens*, as in the natural disposition, whereby it looses that Spring and Elasticity, which served to equal its force, to that of its *Antagonist*.

Their *turning Pale, their Fainting,* and *not being able to stand,* are all effects of the Coagulation of the Blood;



Blood ; which obstructing its due Circulation, especially to the superior parts of the Body, hinders its flowing up to the Face, and spreading it self in the Cheeks, in as large *Paleness*. a quantity as usually, whence they loose their colour : For, 'tis from the Blood alone, that all parts of the Body receive their *Redness*, as well as their *Heat* ; which is evident, since by Syringing out the Blood, any part of Man's Body, even the *Heart* or *Liver* may be made as white as ones Skin : The same Coagulation of the Blood, hindering the due separation of the Spirits, they are not supplied in a sufficient quantity to the Muscles of the Body ; upon which an universal *Feebleness*, or as I may call it, *Relaxation*, seizes every part, and the Muscles are no longer able to support the Body, which by its own weight, sinks to the ground, and there remains as Dead ; none of the Organs of the Senses being able to receive and transmit the Impressions for want of Spirits. Hence it is clear, that those who were altogether Senseless during the Fit, can no ways remember

member what happen'd to them in it : *Remembrance being only the renewing of a Perception we formerly were affected with.* Now after some time, the Blood by reiterated Circulations and Divisions, from greater into lesser Vessels ; pressing through strait Windings and Passages, attenuates its self in a great degree, whereupon the *Heterogeneous* Particles of the Blood, and Crudities more easily meet, and ferment with each other, till at last the Blood attains its natural Liquidity, and the Crudities are changed into the nature of Blood ; whereupon the *Fluidum motivum cordis*, seperates its self as usually, and consequently the *Pulse* beats *Quick* and *Full*, as before the Fit ; the parts regain their natural *Warmth*, and the Face its usual *Colour*, the Blood being now supplied every where, in its due proportion and qualities. They *perceive all Objects* because the Spirits are again seperated in the Brain ; and distributed to the Nerves, as in the natural disposition of the Body : They *open their Eyes*, because the

the Spirits flowing in their usual quantity into the *Orbicular Muscle*, contract it so as to extend the *Musculus Aperiens* as usually; whereupon by its own Elasticity and succeeding Contractions, it pulls up the Orbicular, and in this manner the alternate Contraction continues as I explain'd at large above: But whilst the Patients thus return to their natural State, it is observable that they give a great *Sigh*; which is occasion'd by the Opression, which some Stagnation of the Blood, yet remaining in the Lungs, causes there; which makes the Spirits flow from thence to the Brain, and induce a troublesome uneasie Sensation; thence by the *Angle of Incidence*, or the *Proximity of the Origin* of those Nerves, they flow in greater quantity into the Muscles, which serve for the Inspiration, whose Contraction is thereby render'd more violent, and lasts longer; and by consequence, a greater quantity of Air is admitted into the Lungs, which distending them so as to cause an Uneasiness, the Air is again expelled



led with violence, which is what we call *Sighing* ; the natural design of this Mechanism is, to attenuate and dissolve the stagnated Blood, which remains into the Lungs, by more Nitre, which enters with a greater quantity of Air.

*Swelling  
of the Belly*

*Pain in the  
Hypocon-  
dres.*

To others, few, or many of these Accidents shall happen ; and moreover, there Belly shall be swell'd, any stretched like a Drum, by the extraordinary Rarefaction of the Indigestions, and Crudities contain'd in the Stomach and Guts, which cause a more sensible Pain in the *Hypochondres*, than in any other part of the lower Belly ; because, besides the distention it makes there, of the five pair of Muscles, which are called the Muscles of the lower Belly ; it does also press the *recti abdominis*, the Kidneys, and the *Mesenterick plexus's*, so as to cause a violent Reflux of the Spirits, from them to the Brain, by which a painful Sensation is produc'd in the Soul, and refer'd to that part. Sometimes these Indigestions rarifie themselves, so on a suddain, that they stretch the

the Tunicks of the Guts beyond their natural Extent, and so render them incapable of performing the Contractions, necessary for their Peristaltick Motion, which used to force these *Flatus* downwards; and consequently remain in the part of the Guts they had distended, and cause a Swelling or *Tumor* in that place : And tho' it be matter of Fact, that a Liquid Body, distending with violence, and on a sudden any Membranaceous cavity, will obstruct its own passage; yet I am inclined to believe, the Winds form these Tumors, and Distentions in those places, where the Guts turn round, because the Angle of Inflection, straitens their passage, and consequently, it is easier for an obstruction to be formed there : Again, the Reduplications of the *Nervous*, and *Glandulous* Tunicks of the Guts, make several Wrinkles, or Valvules; which *Kerking* calls *Valvula conniventes*, placed there by Nature, to detain the Aliments, till all the Chyle has entred into the *Milky Veins*, whose Orifices ex-

*Swellings in the lower Belly, which the Ancients took to be the Wombs changing it self from place to place.*

F                      tuberate

tuberate into the Guts ; now these *Valvules* contribute much to the hindering of the free course of the Winds downwards, and are themselves a sufficient Impediment, to cause this Stoppage. These *Tumors* change from place to place, because when they have remain'd for some time in one part, the Heart of the Bowels, and circumjacent Parts rarifies the Winds so, as to make them lose much of their Elasticity ; and then the Contraction of the Fibres of the Guts over-powers their Force, which, together with the succeeding Winds pressing on, drives them downwards ; till another *Valvule* stops their Passage, and there form's a new Tumor, and so successively from one part to another ; wherefore the Patients comparing what they feel within their Body ( of whose inward Parts they have no clear Idea ) to what they see in other Mechanicks, fancy it is some solid Thing, which moves up and down in their Belly, because they perceive a Distention in one Part, than some feeling of a Motion from that



that part to another, where again they feel a new Distention, and so successively perceive several Motions, and Distentions, which are sometimes lower, sometimes higher in the Belly, according as they advance forward in the Guts, which do not go in one straight Line down to the *Anus*, but fold themselves in several Rounds or Windings so, that an inferior Part of them, is in many places nearer to the Head than the Superior. The Winds moving in this manner down the Guts, is what the Antients call'd *Globus*, which they fancy'd to be the Womb's changing it self from place to place; whereas the Ligaments which tie it down render that impossible. Besides that Men are afflicted with this Symptom as well as Women.

The *Cold* they feel all *up their* *The Cold  
up the back*  
*Backs*, is caus'd by the Crudities, and Indigestions, which having receiv'd a sufficient Division to enter by the Milky Veins into the *Ductus Thoracicus*; being Sower and abounding with fix'd Acids, irritate the Nerves of those Parts with such a Mo-

tion, as causes a feeling of Cold all the way they go up the Back to the left *Subclavian* Vein, where being power'd into the Blood, they interweave themselves with its Sulphurous Parts, and so thicken and coagulate its whole Mass; whereby it squeezes out its watery and serous Parts, which abounding with fix'd Acids from the Crudities, cause a feeling of Cold all over the Body; which is accompanied with a *Lowness of the Pulse*, the coagulation of the Blood hindring it from being furnish'd to the Arteries in its usual Quantity: whence it hardly distends them enough to make their Beating sensible to us. The *Head*

*Headache.*

*aches* because the thick coagulated Blood stagnating in the Muscles of the Head, causes a Distention there; whence a violent Reflux of the Spirits is made to the Brain, and that uneasy Sensation call'd Head-ach, produc'd.

There is also a *Palpitation of the Heart* caus'd by the thick coagulated Blood, which obstructing its own Passage through the Lungs, hinders the

the Blood which is continually forc'd <sup>Palpitation of the Heart.</sup> into them from the right Ventricle of the Heart, from continuing its free course as usually; and it not being possible for the Arteries, to receive all its motion, it rebounds back against the Heart, and causes (besides that of its Contraction) another Motion in it, which forces the Heart against the Ribs, and is what we call the Palpitation of the Heart. And to be convinc'd that this Palpitation is not caus'd, as most Physicians imagine, by the Convulsion of the Heart; Take a live Dog, and tie his Pulmonary Artery at a small distance from the Heart, you shall thereby cause its Palpitation. Sometimes a violent *Syncope*, that is a <sup>*Syncope.*</sup> Cessation of Breathing, ensues; to wit, when the Blood is coagulated to such a Degree as to hinder for some time, the separation of the *Fluidum motivum cordis* from it; which as the most Learned Doctor *Chirac* proves in his Treatise *de Motu Cordis*, causes the Contraction of the Heart without the Concurrence of the Spirits from the Brain; which is re-

F 3      quired



quired to the Contraction of all other Muscles.

Those who after all or some of these Accidents, return to their natural Heat, without falling into any hot Fit; have a thick gross Texture of Blood, whose Sulphurous Particles are very hard to be divided; and hang toughly together; so that the various Circulations, and Miscellany of *Heterogeneous* Salts of the Crudities, can only have Energy enough to attenuate it, into its ordinary Division, not to exalt it into a violent and preternatural Fermentation. Sometimes in this State, which begins with a violent Cold, and ends with a natural Heat only, all these Accidents will happen, sometimes the greater Part, and sometimes but very few; in one, they are more, in another less violent; which are all to be explain'd by the greater or lesser Quantity, or fixedness of the Crudities and Indigestions.

In others, *viz.* those whose Constitution of Blood, tho' gross and thick, is not quite so difficult to ferment

ment as the former; after many of these Accidents when the Cold is ended, there succeeds a violent Heat, which casts them into several of the former Accidents, as *Palpitation of the Heart, Headaches, Giddiness, Difficulty in Breathing*; and into some new ones, as *Flushing of the Face, violent Beating of the Arteries, and Muscles; Convulsions, Foaming at the Mouth, Raving and a Tingling, or Pricking Sensation in the Thighs*, which were paralytick during the Cold.

In the first place, the *violent Heat* Violent beat, is produced by the Concurrence of the Salts of the Blood and Crudities, which after various Circulations and Divisions, from greater into lesser Vessels, are at last attenuated, so as to meet and ferment with each other, and divide the sulphurious Parts of the Blood, whereby more Salts are still let loose, which fermenting together, put the whole Mass of the Blood into a most violent Ebullition, which causes a Heat throughout all the Body. Now it is evident that in this Case, the *Palpitation of the*  
F 4 *Heart*

*Palpitation  
of the heart*

*Heart* will happen, and that in a more violent manner, than it did in the Cold : Bcause the Blood, being in a great Ferment and Rarefaction, is forc'd in vast Quantities from the right Ventricle of the Heart, into the Lungs, where its free Circulation is hindred by the coagulated Blood, of which some still remains in the Lungs : Wherefore it returns with violence back upon the Heart, and forces it against the Ribs. Hence also a *Difficulty of Breathing* inevitably ensues, because the Blood not having its free Passage thro' the Lungs, its extraordinary Rarefaction distends the Blood-Vessels to a great degree, and consequently squeezes the Vesicles of the Lungs, so, that they can admit but of a small Quantity of Air. As for the *Headache*, it is produc'd by the violent Distention which the Blood makes as it passes thro' the Head ; whereupon the Spirits are forc'd with a rapid Motion, up to the Brain, and cause this troublesome Sensation. The reason why this uneasie, painful Sensation is more perceptible in the Head than elsewhere,

*Difficulty  
of Breathing.*

*Headache.*



where, is, because the Blood being attenuated and volatiz'd, mounts in a greater quantity than usually up to the Head, whereupon there ensues a greater distention of the Blood-vessels and fleshy Parts thro which the *Blood* passes. This distention imparts a violent Motion to the *Pericranium*, which is a Nervous Membrane of exquisite Sense, and the Skull which is next to it, being a solid hard Body, receives little of its Motion: Wherefore it is almost all imparted with violence by the Spirits up to the Brain; whereas in other Parts of the Body which are more fleshy, a great Part of the Motion is communicated to the slack yielding Fibres of the Muscles, and what remains, gives but a moderate Motion to the Spirits.

The *Giddiness* is produc'd here in the same manner as in Drunken People; that is, the extraordinary Fermentation of the Blood, forces it in greater Quantity up to the Brain; where on a suddain, it distends the *Blood-Vessels* in an unusual manner, and consequently presses the *Cortical Glands*, *Giddiness.*

*Glands*, so that they cannot separate the Spirits; which is the same thing as if the Blood furnish'd none. Hence there is a Deficiency of them, they turn circularly in the Brain, and make us imagine all things turn round. And if this Compression of the *Cortical Glands* be still greater, it will totally hinder all Influx and Reflux of the Spirits, and so produce *Drowsiness*. a *Drowsiness* or sort of *Lethargy*, by causing a Cessation of all Motions and Perceptions.

The same violent Fermentation and Boiling of the Blood, causing it to mount in vast quantities up to the *Face* and *Cheeks*, their Muscles are fill'd with it, and their Skins are rarefy'd by its great Heat, so as to give a free Entrance to the Luminous particles of the Air, which being reflected back from the Blood to our Eyes, produce in us the Perception of its Red Colour, and tho' this fermentation of the Blood alone causes the *Flushing* in many Distempers, yet in this there are two other causes which concur to the producing of it: the first is the violent Contraction which

which the *Scalene* or *Triangular Muscle* of the Neck suffers in all Difficulties of Breathing, whereby it so presses the Vein and Artery (which have a Passage thro' it) that the Blood cannot freely return from the Head, but is detain'd there in great quantity, and fills the Face and Cheeks. The other Cause is the violent Contraction of the Diaphragm, whereby the *Vena Cava* which pierces thro', and is fasten'd to it, is pull'd down and stretch'd, so as to straiten its Cavity, to that degree, that the Blood which comes from the inferiour parts cannot mount up to the Heart, in its due quantity, therefore there is less admitted into the Arteries, which furnish the Blood to those inferiour Parts, and consequently more is forc'd into the upper Parts of the Body, and into the *Face*.

The *Raving*, is produc'd by a Mixture of Heterogeneous Particles <sup>*Raving.*</sup> with the Spirits, which fermenting with them, make their Motion violent, and irregular in the *Emporium of the Brain*, where they do at once irritate a great many little Nervous Fibres,



Fibres, and renew many confus'd incoherent Idea's of things past. For *Raving* being nothing but a *disorder of Reason*, and *Reason* consisting only in the *Affirmative or Negative Comparison*, which the Soul makes of two or more distinct Perceptions; it follows, that if there be renew'd at once a great many incoherent Idea's, of which the Soul has no clear and distinct, but only confus'd Perceptions, she cannot form a reasonable Judgment of them.

Contracti-  
on of the  
Muscles.

Moreover this Confusion of the Spirits causes great and irregular Influx's of them into several Muscles, whereupon they are put into violent Contractions or Convulsions: But to shew clearly how this irregular Influx of the Spirits causes Convulsions, it will be necessary first to explain in what manner the natural Contraction of the Muscles is produc'd. It is as follows: Every Muscle is compos'd of a vast multitude of Fibres, like Threads, which are folded up altogether in one Skin or Membrane; every one of these little Fibres has a Vein, Artery, and Nerve, which

which belongs to it: Moreover it has from space to space, several little Pores or Cavities, which are of a long Oval Form, whilst the Muscle is slack; now the Blood as it circulates thro' the Muscle, continually depofes into these Pores a Sulphuri-ous Recrement abounding with Alkaly Salts; which meeting with the Spirits, that flow by the Nerves into the same Oval Pores, their *Nitroa-erial* Particles ferment in a most violent manner with the Salts of this Sulphurious Recrement, and thereby distend the Pores so as to make them round from Oval, as they were before: And this happening to every Fibre of one Muscle at the same time, it is evident it will be contracted or shorten'd. The Analytical Proof of this, you may see at large in *Dr. Chirac's Physiology*. Now when the Mixture of Heterogeneous Particles with the Spirits, causes their irregular Motion, and greater Influx into any particular Muscle; it puts the *Copula explosiva* of that Muscle into an extraordinary Fermentation, whereby it is contracted with

Convulsi-  
ons.

with a Superiour force, to that of its Antagonist ; when that Explosion or Fermentation is ended, the attenuated Particles of the Sulphurious Recrement, together with the Spirits, are evaporated, partly into the Blood, and partly into the Air, thro' the little insensible Pores of the Body ; and as by their irregular Motion, the Spirits flow continually in greater quantity into this or these Muscles ; it is manifest they will cause violent, frequent, and almost continued Contractions in them, which is what we call *Convulsions* ; which when they happen to the Tongue and Muscles of the lower Jaw, press the *Salivary Glands* and Conduits so, as to squeeze forth a great quantity of Spittle into the Mouth ; which being a Recrement of a viscid Nature, the Air which continually enters in or comes out of the Lungs, mingles with it and formes little Bubbles in it, which is what we call *Froath*, or *Foaming at the Mouth*.

Extraor-  
dinary  
Beating  
of the Ar-  
teries.

Sometimes they perceive a Beating of their Arteries, in places where  
it,



it is not customary to feel any. The Reason is, that the Blood changing from the State of Coagulation, there cannot but remain some Particles of it, which do not dissolve so soon as the rest; which making a Stoppage either in the Pores of the Muscles, or in some of the lesser Veins, or Arteries, hinders the Blood, which continually is press'd forward by the Heart, from continuing its Circulation, so that finding no way to return back, it swells and distends the Arteries more than usually; whence we perceive their more *violent Beating* at every Contraction of the Heart.

Beating of  
the Ten-  
dons or  
Muscles.

And since the *Copula explosiva* in this state, wherein the Blood is not equally dissolv'd in all parts, is distributed in an unequal proportion to different Muscles of the Body; hence those which have the greater Share, suffer violent Contractions, and make a Pulsation like to that of the Arteries; which does not beat at the same time with them, nor is so frequent as their Pulsation, but is more quick, that is, the Explosion is sooner over.

The

The *Thighs* which were *Paralytick* during the Cold, because the coagulated Blood had caused a Relaxation, or Obstruction of their Nerves; now are affected with an *Itching Sensation*, or *Tingling*; occasion'd by the Blood, which fermenting a-new, dries up, or evaporates the Humidities which relax'd the Nerves, during the Cold; or, dissolves those coagulated Humours, which obstructed their Cavities: wherefore, the Spirits flow into their Nerves a-fresh, and animate the Blood which stagnated there before, whose grosser Salts being put in Motion, irritate the Nerves of the Part affected, and give the Spirits that degree of Motion, which makes them flow up to the Brain, and there cause the Sentiment of *Tingling*. And when the Palsy (as sometimes it does) continues during the Hot Fit, it is because the Blood does not ferment enough to dry up the Humidities, or dissolve the Obstructions of those Nerves.

There is another State somewhat different from the former, in which;  
Chilness

tho' the Pulse be almost imperceptible, yet it is for so very small a time, that it is hardly to be discovered; and at the same time they feel a Chilness over all their Body; during which no remarkable Accidents happen; but immediately after it, there succeeds a violent Heat or Fermentation of the Blood, which casts the Patient into several Accidents which I have explain'd above, as proceeding from the preternatural Fermentation of the Blood. Now since the weakness and lowness of the Pulse, remains but for a little while, and that the Chilness is not very great, it is manifest, the Crudities are not of so fix'd a Nature, in this, as in the State abovemention'd; where the Cold, which succeeded the Hot fit, was far more violent and lasted longer; which is also evinced by the Pulse which is far more high, and frequent in this Constitution; the Rarefaction of the Blood distending the Arteries more, and its extraordinary Division, supplying the *Fluidum motivum Cordis* more frequently to the Heart; than in the above-mention'd State.

Quickness  
of the  
Pulse.

G

The



The third Constitution of those who are troubled with *Vapours*, is that, in which at the very beginning of the Fit, there is manifestly perceiv'd a violent Heat or Fermentation of the Blood; when not the least Perception of Cold or Lowness of the Pulse, could be observ'd to have preceded it: And since it is matter of Fact that the Pulse is far more Quick in this Constitution, than in any of the abovemention'd; and that it approaches very near to the Nature of a Fever, we have good Reason to say that the Sulphurs of the Blood are more open, and the Salts do more easily meet, and ferment with one another, than in the other Constitutions. For why should the Pulse be more frequent here? If it were not that the greater Fermentation of the Blood separated more of the *Fluidum Motivum Cordis*, which not being here of a gross Nature, as in the Cold fits, but compos'd of more volatile Particles, soon ends its Explosion, and easily evaporates, and transpires out of the Pores of the Heart, to which a new quan-

ti ty

tity of *fluidum motivum* succeeds immediately, which making its Explosion in a very little time, and being immediately succeeded again by a fresh quantity of the *fluidum motivum*, causes frequent Contractions of the Heart; which forcing out the Blood into the Arteries, quicker than usually, are the Cause of what we call *Frequency of the Pulse*. All or most of the same Symptoms happen here, as did in the Hot fit; which succeeded the Cold, and are all to be explain'd in the same manner; the great Fermentation of the Blood equally producing them in both States; tho' in the latter, the extraordinary boiling of the Blood render them more violent.

*Quick beating of the Pulse.*

Of this Constitution are those who fall into *Hysterick Fits*, at the Smell of *Civet, Musk, Amber*, or upon any violent *Passion*; and since the *Miasmata* or Particles which exhale from those odoriferous Bodies, put their Blood into so violent a Commotion, I conclude that their Sulphurs are far more open, and the Salts more volatile and ready to ferment,

ment, than in any of the abovemention'd States.

*The smell of Civet, Musk, Amber, &c. cause Hysterick Fits.* *Civet, Musk, Amber, &c.* cause *Hysterick Fits* by the insensible Particles which continually exhale from them, and enter into the Lungs, together with the Air we breath ; where immediately they ferment with the volatile Parts of the Blood, and cause such a suddain Rarefaction in it, as to hinder its free Circulation thro' the Lungs, whence a Difficulty of breathing will ensue, as also many other Accidents, which I have elsewhere deduced from the violent Heat of the Blood : and which are produc'd here in the same manner. And tho' I will not be positive that the Particles which exhale from these Odoriferous Bodies, do part of them enter by the Pores of the Skin into the Blood ; and so augment its Fermentation, (as considering that the Recrement of insensible Transpiration, continually evaporating thro' these Pores, with an opposite Motion, may probably hinder any other Body, that presents it self, from entring in ) yet there are several



veral good Reasons, to make me conjecture they do: which if so, it is evident they will contribute towards setting the Blood in a violent ferment; Moreover the impression these Particles make upon the Membrane of the Nostrils, raising in them no pleasing Titillation, but a disagreeable, uneasy Sensation; a violent Reflux of the Spirits is made from that Membrane to the Brain, and causes the perception of an uneasy Sensation, whence the Spirits flow in greater quantity into several Parts of the Body; and mingling with the Blood augment its fermentation.

Any violent *Passion* sets the Blood why upon a Passion the Blood is put into a greater ferment: a boiling, because at that time, the Soul having receiv'd an Impression from some Object which causes an Aversion in her, she immediately puts all parts of the Body, in a readiness to free her self from the Hated Object; hence she determines the Spirits in great quantity into all the Muscles of the Body, as if she requir'd their Aid to drive it away; This greater Influx of the Spirits, causes violent Contractions of the

G 3

Muscles;



Muscles ; which (together with the Spirits that evaporate into the Blood after the Explosion is made in the Pores of the Muscles) attenuates the Blood, and augments its Fermentation ; but what mostly causes the violent boiling of the Blood, during a *Passion*, is, the mixture of a greater quantity of *Gall* with it, together with the Volatility and Exaltation of the Salts of that Recrement ; For, whereas the Spirits during this *Passion*, are determin'd in greater quantity than usual into all parts of the Body, the Muscles of the Diaphragm and lower Belly receive more than usually, and consequently contract themselves with greater Violence, (as it is matter of Fact, they do in this *Passion*.) Now they cannot contract themselves with greater Violence, but that they must press and squeeze the Liver extremely : Add to which, that at the same time, the Spirits flow in great quantity into the Liver it self, and cause a Contraction in the Membranes of its Excretory Glands: By the action of which two Causes together, it is evident,

Cho



the *Gall* will not only be press'd out in greater quantity, by the *Porus Cholidocus* into the *Duodenum*; but also have its Salts much attenuated and volatiliz'd; partly by the Violence, wherewith the contraction of the *Diaphragm*, Muscles of the *Abdomen*, and *Villa Fibrosa* of the Liver force it out; and partly by the Mixture of the Spirits which after their Fermentation is ended, mingle with the *Gall*; which thereby is put into a great Ferment, and flowing in great quantity into the Guts, enters by the Milky Veins into the Blood, and causes its violent Effervency.

And since I have explain'd in what manner a violent *Passion* produces these Fits, I find my self necessitated to give a Reason for a *Symptom*, which *Sydenham* takes particular Notice of, which is, that Patients who immediately before, made Water of Citron colour, being suddenly seiz'd with any *Passion* or Perturbation of Mind, do the very next Moment make a great Quantity of Urine clear as Rock-water. Now when this Perturbation of Mind happens by any *Fear* or Apprehen-

*Why the Urine is voided clear, and in a great quantity during a Passion.*



sion; the Spirits being by the *Passion of Fear* retain'd in the Brain, it is clear the Fermentation of the Blood must abate, and consequently its Sulphurs approach each other, and press out the watery Serous Parts of the Blood, with little or no Mixture of either Salts, or Sulphurs; which give a Colour to the Urine; for the Clearness of Urine consists in nothing, but in a greater quantity of Water in proportion to the quantity of the other Parts, whereof the Blood is compos'd.

But how the Urine should be evacuated clear as Rock-water, when by *Anger*, or any violent *Passion*, the Blood is put into a violent Ferment and Agitation, is something more hard to explain; For we see that in an *Ague*, clear Urine is evacuated plentifully during the Cold fit, and that because the Coagulation of the Blood, presses out its serous Parts in a greater quantity than usual, without a proportionable Mixture of Salts and Sulphurs; but when the Hot fit has been on for some time, then the Urine turns of a high Colour,

lour, and reddish; the violent Fermentation, having attenuated, and divided the Salts, and Sulphurs of the Blood, so, as to let a greater Proportion of them be separated in the Kidneys with the Urine. The best Reason I can give of the *Phenomenon* in question, is, that whereas by *Anger*, or any violent *Passion* of the Mind, the *Gall* is forc'd out in a greater quantity by the *Porus Cholidocus* into the Guts; by its Irritation, it causes a swifter *Peristaltick* Motion in them; and moreover, in mingling and fermenting with the *Fomes* of the Distemper, which lies in the Folds and Wrinkles of the Guts, it dissolves it, and makes it enter by the *Milky Veins* into the Blood, which it immediately coagulates, by its Sower Particles, and thereby squeezes out the serous Parts with little mixture of Salts; but when by various Circulations these Indigestions are sufficiently attenuated, and divided, then a due proportion of Salts and Sulphurs, are separated with the Serous Parts, and the Urine regains its natural Colour.

An-

Another reason which may be given, is, that the *Gall* entring in great quantity into the Blood, and being an *Alkaly Acrimonious* Salt, first exerts its action upon the Sulphurs of the Blood, which by its rolling Points it separates and divides, whence immediately the ferrous parts of the Blood which were contain'd within the Sulphurs, escape and are separated by the Kidneys, before the Salts have had time to ferment and divide themselves enough to be separated with them.

*Short and  
frequent  
Breathing.*

The *Short and frequent Breathings* which happen sometimes in this Distemper, are caus'd by the Heat and Rarefaction of the Blood, or its Stagnation in the Lungs: For the distention thereby caus'd in the Lungs, makes the Spirits flow from them to the Brain, thence by the *Angle of Incidence*, or by *Proximity of the origin of the Nerves*, into the *Diaphragm* and *Intercostal Muscles*, both internal and external. (Note, that most Anatomists are of Opinion that the outward *Intercostal Muscles* serve for Expiration, and the inward



ward for Inspiration: But it is matter of Fact, as you may see by laying open those Muscles, in a live Dog, that both the inward and outward *Intercostal Muscles*, contract themselves during the Inspiration, and are Antagonists to the Muscles of the Lower Belly.) Now the Spirits cannot flow in a greater quantity into the *Diaphragm*, without causing a contraction in it, which pulls the *Mediastin*, *Pericardium*, and *Vena Cava*, which adhere to it, lower down into the Belly; and consequently gives more space to the Lungs, in the Cavity of the Chest; and the *Intercostal Muscles* contracting themselves at the same time, advance each inferior Rib, up to that above it: and thereby render the Cavity of the Breast still larger. Now the Air contain'd in the Lungs, having by the heat of the Blood been rarify'd, and lost its Elasticity, the external Air, by the pressing of circumjacent Bodies, and its own Spring forces its way in; As it is evident by several Examples it will do, wherever it finds other Air more rarify'd,

Examples  
to prove the  
Spring of  
the Air.

rarify'd, and less Elastick than it self. For example, make a great Fire in a Room, and a small Hole in the Door, the Air shall rush in with Violence thro' the Hole; because the rarify'd Air in the Room has not force to oppose its pressing in. So, a Bladder fill'd half full of Air, cannot distend it self in a Valley, where the external Air presses with equal force against it: But being carry'd up to the top of a high Hill, where the Air is more rarify'd, it distends it self, and fills the Bladder. Now tho' the External Air, forces its way in this manner into the Lungs, yet it enters but in a very small quantity, because the great Distention which the Blood makes, presses the Vesicles of the Lungs so, that they cannot contain much Air; and, that little which does get in, is soon rarify'd by the heat of the Lungs; when at the same time the *Diaphragm* ending its Contraction, the *Mediaſtin Pericardium*, and *Vena Cava*, by their Spring pull it up into the Chest; whereupon the Muscles of the lower Belly, (which during the Inspiration and Con-

Contraction of the *Diaphragm* were extended so, as to have the Cavity of their Nerves straiten'd, and by consequence the Spirits hindred from entering into them, in their usual quantity ) return to their natural State ; and the Spirits which stood crowding at the Origin of their Nerves, flow abundantly into them : whereby the Muscles are contracted, the Ribs drawn down, and consequently the Cavity of the Chest, is straiten'd ; and moreover, by the same Contraction, the *Guts, Liver, Lights,* and *Diaphragm*, being rais'd up towards the Cavity of the Chest, do press the Lungs, and so force out the Air ; Add to this, the Spring of the *Villa Fibrosa* in the Lungs, which being distended by the Air during the Inspiration, do by their own Elasticity, contract themselves and help to squeeze out the Air. During this Mechanism of Expiration, the *Diaphragm* is distended, its Nerves stretch'd, and their Cavity straiten'd so, as to hinder a sufficient Influx of the Spirits into them ; but as soon as the Contraction of their Antagonists is



is ended, the Spirits rush into its Nerves, and contract it anew : Whereupon an *Inspiration* follows, which is succeeded by an *Expiration*; and that, by another *Inspiration*; and in this manner ; there is a Mechanical and uninterrupted Succession of *Inspirations* and *Expirations*, during the whole Life of Man : And this Alternate Motion is so far from being caused by any Act of our Will, that it not only continues free and entire in our Sleep, when the Soul has little or no Operation on the Body ; but also, as we find by Experience, it does not lie in our Power, to hinder, or hasten this Motion, for a quarter of an Hour together. Now the *Distention* or *Heat* of the Lungs ( which makes the Spirits flow to the Brain, and thence to the *Diaphragm*, and *Intercostal Muscles* to cause their Contraction ) being perpetual, causes frequent, and almost continual Contractions of the *Diaphragm*, to which the Muscles of the lower Belly, are Mechanically necessitated to correspond in their Motion, and to contract themselves  
alternate.

alternately, to every one of its Contractions; and by this Means the Patients breath much shorter; that is, quicker and oftner, than in their Natural Temper.

And tho' for the most part, the Fit seises the Patients in one of the manners abovemention'd; yet sometimes it takes them otherwise, but, may still be referr'd to some one or other of the former Constitutions: As for Example, a Person who was well the Moment before, shall without any other Symptom preceding, *Weep* most bitterly, *Shriek*, and *Cry out*, then *fall flat upon the Ground*, and there remain senseless, till she recovers of her Disorder; And tho' no remarkable Symptom could be observ'd to fore-run these Accidents, yet upon strict Enquiry and Examination, you will still find there was some little Chilness; some Shivering, or Perturbation over all the Body, caus'd by the first Mixture of the Crudities with the Blood; which in this Case not being of a fix'd Nature, do immediately mingle with the Blood, ferment, and attenuate them-

themselves, and are separated together with the Spirits, in the Brain; where their Heterogeneous Particles disturb the regular Motion of the Spirits, and renew those Idea's which were deepest imprinted, and most fresh in the Brain; And the Thoughts of such Persons being generally imploy'd upon dismal and melancholy Subjects; the Impressions of painful Sensations are renewed; whereupon the Soul causes all those Motions in the Body, which were establish'd by the Laws of the Soul's Union to it, to move *Pity* and *Compassion* in the Beholders. These Motions are Chiefly a violent Depression of the Eyebrows and upper Eyelids, and a Contraction of the under Lids, which happening together, cannot but press the Glands which are situated within them, at each Corner of the Eye; and thereby squeeze out of them, that serous, watery Humor, call'd *Tears*; which being hindred from flowing by their usual Channel; because the Contractions of the outward Muscles of the Nose, which are constantly to be

*Fits of crying.*



be remark'd in this Passion, obstruct the Passage, by which they us'd to exonerate themselves into the Cavity of the Nose, they are forc'd out between the Eyelids, and run trickling down the Cheeks.

They *Cry*, and *Shriek out*, on purpose to call others to assist them; but the irregular Motion of the Spirits, being such as is not easily govern'd by the Will; The Soul cannot determine the Spirits in their due quantity into the Muscles of the Tongue and lower Jaw; and when they are there, by their too great quantity, or irregular Fermentation, they cause irregular Contractions, unaccustom'd to the Pronunciation, and Articulation of Words; and make convulsive interrupted Contractions, which forme nothing but inarticulate *Mutterings* and *Sounds*. Moreover, the Difficulty they have of Breathing, makes them continually elevate their Chest to receive in such Air, which finding but little space in the Lungs, is soon forc'd up again: Which frequent Inspiration, and Expiration, together with Con-

H                      vulsions

vulsions of the Muscles of the Tongue, and lower Jaw, gives several Collisions to the Air, which cause a sharp, shrill Sound.

*They fall  
down.*

Their falling flat upon the Ground may be explain'd two ways: The first, because the Spirits flow in greater quantities than usual, into the Muscles which are Antagonists to those that sustain the Body: whereby they are necessitated to yield to the Superior force, and let the Body sink down. Which, tho' it be the Opinion of a most ingenious Philosopher, yet in my Judgment, is not altogether so Mechanical, as if you should say, that the Spirits not being supply'd in a sufficient quantity (as it is demonstrable there are not at some times in this Distemper) the Muscles which sustain the Body, wanting their due proportion, yield to its weight, which according to the Nature of all Bodies, still tends downwards: so if a Man as he is standing should fall asleep, he tumbles down, not because the Spirits flow in greater quantity into the Muscles, which  
are

are Antagonists to those which sustain the Body; (for what reason can be given for their greater Influx, in either of these States?) But because during Sleep, the Spirits are detain'd in the Brain, and by consequence are not furnish'd in a sufficient quantity, to the Muscles, to conserve their Tension; wherefore the weight of the Body is superiour to their force, and it sinks down; It is also for want of this same Tension of the Nerves, which belong to different Senses, that we perceive no impression of extern Objects whilst we sleep.

Others fall into violent *Fits of* *Fits of*  
*Laughter*, which will be follow'd by *Laughing*.  
some, more, or all of the abovemention'd Accidents. These *Fits of Laughter*, are caus'd by the mixture of Heterogeneous particles with the Spirits, which fermenting them in the *Emporium* of the Brain, renew the Idea's of things which had formerly affected them with pleasing Sensations; whereupon the Soul acts the Body with those Motions, which were ordain'd by Nature, to discover



to others, our *Joy*, and *Satisfaction*. These Motions are the Elevation of the Eyebrows in that part which answers to the middle of the Eye, and their Depression in that part which is near the Nose; the Contraction of the upper and under Eyelid at the same time, so as almost to close the Eyes, the opening of the Mouth in such a manner as to shew the Teeth, when at the same time both corners of the Mouth are drawn back towards the Ears, and pulled up, so as to cause a wrinkle in the Cheeks, which makes them seem swell'd and rais'd above the Eyes; the Nostrils are wide open, and the Eyes moisten'd with Tears; nay, sometimes they flow down the Cheeks as when they cry.

*Violent  
Struggling*

Some will *Struggle so violently*, that several Men are scarce able to hold them; this happens when the Sulphurous parts which serve for the Contractions of the Muscles, are of a tough viscous indivisible Nature; wherefore, they do not as usually ferment with the Spirits in the Pores of the Muscles, to contract

tract them, and then immediately evaporate by the insensible Pores; but cause a kind of swelling and distension without division, which extends every Pore, much more, and lasts much longer than usually; hence comes their extraordinary Force, answerable to the Conjunction of several ordinary Persons strength put together. Now, when long continu'd Contractions, happens in this manner to the Muscles of the lower Jaw, Lips and Nose; they press the Mouth and Nostrils so close together, that they cannot draw Breath of long while, and are almost stifled.

In this same Constitution it shall sometimes happen, that a Person shall remain for a long while with his Breast and lower Belly Elevated, as during the time of Inspiration: Because in this case, the Sulphurous Particles which are seperated in the *Intercostal Muscles*, and *Diaphragm*, being tough and indivisible, the fermentation which the mixture of the Spirits excites, cannot divide them, but makes a swelling and Rarefaction like unto the Fermentation of

*How they live for a long time without any signs of Breathing.*

H 3 Dough;

Dough ; which distends the Pores, and keeps these Muscles in one continu'd Contraction, till the Rarefaction is ended, which sometimes lasts for several hours. It is really strange, that People have lived in this Condition for three days together ; whereas, we cannot naturally live for a quarter of an hour without fetching Breath : But since this does happen, tho' but seldom, we must suppose, that altho' the want of Breathing, does render the Blood of these Persons more thick ; yet its Sulphurous Particles are of such a nature, as not easily to be coagulated by the Acids ; whereby the Blood retains fluidity enough to circulate a little, and to make its Salts meet one another, and ferment in some small degree ; which Fermentation being aided ever so little by the Nitre of the Air, divides the Blood enough to preserve the necessary Functions of Life : Now I can make it plain, that tho' these people do not actually seem to breath, yet they incessantly receive new Air into their Lungs : For it is matter of Fact, that  
du ring



during the whole time of this Accident the Lungs are swell'd with Air, which loosing its Elasticity, by the inward heat of the Body, and the loss of Nitre, which it imparts to the Blood; the exteriour Air which communicates with it, does by its own Weight and Elasticity, and the pressing of circumjacent Bodies, rush into the Lungs, where it finds a more easie Entrance than elsewhere, and forces out that which was contain'd therein: Now this fresh Air, imparts more Nitre to the Blood, which keeps it in some Ferment; and in this manner successively when that is rarify'd, new Air enters in, whereby the Blood is continu'd in a sufficient Fermentation to sustain the necessary functions of Life.

One complains of a Pain under her Heart, a reaching to vomit, and sometimes she vomits parraceous cholerick Matters, and it ends with a Jaundice.

These Accidents are caus'd by an Obstruction of the Liver, by which the Gall is hindred from being separated from the Blood, and circulates

along with it, and is mix'd with the other Recrements of the Body. Now when it happens that it has more Analogy with the Ferment of the Stomach, and joyns it self in greater quantity to it, than to the other Recrements of the Body, it will inevitably be render'd sharp and corrosive, whereby an Irritation will be produc'd in the Stomach, that will cause a Reaching to Vomit: And if the Irritation be very violent, it will effectually make the Patient vomit yellow, or green Matters ; which are nothing but the remainder of indigested Aliments in the Stomach, to which it's ferment tinctur'd with Gall, has given the Colour; the Pain they feel under their Heart is an Irritation caus'd by the same vitiated Ferment, or corrosive Gall in the superiour Part of the left Side of the Stomach, which is far the most sensible part of it, and because the *Tipp* of the Heart hangs just over this part of the Stomach ; and they have something a clearer Idea of it, than of the superiour part of the Ventricle ; they refer the Pain to the

*A Pain under  
the  
Heart*

the Heart, tho' it be not in the least affected in this Case. Now when this Obstruction of the Liver has remain'd for some time, the Gall do's not only mingle with the above-mention'd Recrements, but also joyns it self to the Recrement of the *Corpus Mucosum*, and paints the whole Body yellow. For it is this Humor, collected in a visculous continuation between the *Scarf-Skin* and the *True Skin*, that gives the Colour to our Body's; in Tawny-Moors this Humour is of a Tawny colour; in Black-Moors it is black; and white, in White Men: And when its Colour is chang'd, as in the present Case into yellow or darkish, by the Mixture of the Gall, it gives the same Colour to the Body.

*From whence the Body takes its Colour.*

The *deprav'd Appetite*, which often afflicts People in this Distemper, is produc'd in the same manner: that is, by the Obstruction of some Strainers in the Body, causing a Retention of its Recrement in the Blood, and a mixture thereof with other Recrements: For when it meets with something of a Simular Nature in the

*Deprav'd Appetite.*



*Hunger.*

the Ferment of the Stomach, and in the Spittle; it is united to them, changes their Nature, and hinders them from irritating the Stomach and Palate, as usually, with a Motion regulated by Nature to raise in us a desire of convenient Food for our Sustenance. Sometimes they are far more *Hungry* and Craving, than naturally; which happens, because the Salts of the Ferment of the Stomach and Spittle, have acquir'd a greater Mass, and are become more Acid than usually: Wherefore they make a greater Irritation in the Tongue, Palate and Stomach, which are the Organs of Hunger: Sometimes, they have no Stomach to any Meat whatsoever, because, the Glands are so obstructed, as not to separate the Spittle, or Ferment of the Stomach in a sufficient Quantity to cause an Irritation; or because their Salts are so drown'd in serous, watery Parts, as not to be able to make any Impression upon the Organs. And at other times, tho' they Loath all accustomed Nourishment,

rishment, yet they seek odd, absurd Meats, which formerly pleas'd them <sup>Why they</sup> not: For when by any of the Causes <sup>Eat Trash,</sup> now mention'd, the Ferment of the <sup>as Chalk,</sup> Stomach and the Spittle receive such an Alteration, as renders them incapable of producing the accusom'd Irritation, the Patients think and consider with themselves what Meat they could like; but in the mean time, while they are renewing in their Minds the Remembrance of several Meats, the Spittle causing an unpleasant Irritation in the Palate, gives them a Disgust to them all; wherefore they tast of all things they come at, how absurd soever, to find out somewhat that may please them; and if they chance to light upon any that has a proportion with their Spittle, so as by the Mixture of it to cause an agreeable Sensation on the Tongue and Palate; they will grow fond of that, and by their good Will, eat nothing else.

Some, altho' this seldom happens, will *Cough without Intermision*; <sup>Violent</sup> which is occasion'd by the Obstruction of some Gland or other; as the <sup>Coughing.</sup>

the Liver, or Kidneys ; whose Recrement if it chance to be united to that, which is separated in the Lungs, their Salts will continually irritate the Membranes of the Lungs, from whence the Spirits are determin'd to the Brain, and thence by *Angle of Incidence* or *Proximity of the Origin* of their Nerves, flow into the *Intercostal Muscles* and *Diaphragm* : whose violent Contractions cause a great Inspiration, (which is so much the more frequent and violent, when this happens) to force away those troublesome, irritating Salts together with the Air ; Nature having so fram'd all the Springs of Man's Machine, that whensoever any external Body troubles or molests one part, the others, in whose Power, Structure, and Disposition it lies, to be any wise relieving, should immediately put themselves in Motion to do it, without any Determination of the Will.

*Hawking.* The *Hawking* is produc'd by a like Mechanick, tho' the Cause be different : For here, the Blood not circulating freely in the Lungs, causes



a heavy, uneasie Sensation in them; which determines the Spirits into the *Diaphragm* and *Intercostal Muscles*, in much greater quantity than usually: Hence a longer continu'd Inspiration is produc'd, by which a greater quantity of Air being let into the Lungs; it does, by its Nitrous Particles, ferment and dissolve the Blood, so as to make its Circulation more free and easie; and take away or at least diminish the Obstruction and uneasie Sensation.

The *Stretching* happens in the same manner; for when we feel an Uneasiness all over our Body, caus'd by the Thickness and slow Circulation of the Blood; by *Stretching* our selves violently out, we contract all the Muscles of the Body; and thereby attenuate and divide the Blood, and so force that which was slow and drooping before, to accelerate its Motion, and circulate more swiftly, by which means the Uneasiness is remov'd. *Stretching  
of the Body.*

The same Coagulation, or thickness of the Blood, causing Obstructions in the Membranes or Muscles  
of

*Hard Tumors or Swellings in several Parts.*

of the Jaws, Shoulders, Arms, Hands, Legs, or Thighs, hinders the Blood which is continually push'd on by the Arteries, from continuing its Circulation; Wherefore it swells, distends, and elevates that part into a Tumor; which yields not when it is press'd with one's Finger, because the Obstruction hinders the Blood from being forc'd forward, and the opposite Contraction of the Heart and Arteries, will not permit it to return backwards; and if it should yield a little, the Blood would distend it again that Moment the Finger is taken off.

*Spit much and thin.*

They *Spit thin* for several Weeks, as if they were in a Salivation: Because the Blood being render'd more thick than naturally, squeezes forth its watery Serous Particles, which being separated in large quantities by the *Amydales* and *Salivary Glands*, cause the Spittle to flow in greater quantity, and more Liquid and Thin than usually.

*Pain on the top of the Head.*

Sometimes the Patient is seiz'd with a violent Pain in the outward Part of her Head, continually fix'd in

## *Hysterick Fits.*

III

in one place, which may be cover'd with the End of one's Thumb: *Sydenham* calls this *Clavus Hystericus*, and imagines it lies between the *Pericranium* and the Skull; tho' I know of nothing between them capable of receiving any Impression or Sensation. But to conceive how this is caus'd, you must know that the Skull has three *Sutures* or *Seams* by which the Bones that compose the superiour Part of it, are indented one into another, like two Saws joyn'd together; thro' these Seams there pass Veins, Arteries, and a multitude of Nerves and Fibres; which coming from the *Dura Mater*, enter into the Composition of the *Pericranium*; this being so, it is manifest, that when at any time, either by the extraordinary Rarefaction, or Coagulation of the Blood, an Obstruction is caus'd in one or more of these small Veins or Arteries, which pass thro' the Seams; the Blood that is continually forc'd from the Heart into these Arteries, finding no free Passage, will swell, and distend them beyond their natural Stretch, and conse-



consequently, press the Nerves against the Skull, which being solid and receiving but little of the Motion, it is carry'd entire by the Spirits up to the Brain, and there makes a rude Impression, which causes a painful Sensation. It is accompanied with a *Shooting*; because when the Pulse beats, then the Distention of the Arteries is greater, and consequently imparts a more violent Motion to the Spirits, contain'd in the Nerves. This Pain is felt most frequently in the Top of the Forehead; because in that place the Seam call'd *Sagittalis*, falls upon the *Sutura Coronalis*, and in their Conjunction there passes a greater quantity of Veins, Arteries, and Nerves, than where the Seam is single; the same Reason is to be given for its being often felt in the Back part of the Head, where the *Sutura Sagittalis*, falls in with the *Sutura Lambdoides*. Not but that this Pain happens sometimes in different Parts of any one of these Seams, which the Physician may easily find out, by examining, where the Pain is felt: Sometimes this

this is accompanied with Vomiting ; either, because the Motion imparted to the Spirits was such as to make their *Angle of Incidence* answer to the Nerves of the *Diaphragm* and *Muscles* of the Lower Belly ; whereby they contract themselves both at a time, and cause a Vomiting ; or because it accidentally happens, that some of the sharp Humors which seldom fail to molest the Stomach in this Distemper, make a greater Irritation than ordinary, at the same time, and so cause them to vomit.

The *Pains* which sometimes are felt in the *Kidneys, Ureter, or Bladder*, are caus'd by a Distention, which proceeds from a preternatural Coagulation, or Rarefaction of the Blood, or of its Recrements in these Parts ; or else, because the coagulated Blood, squeezes forth ferous Parts upon them, fill'd with sharp irritating Salts, whereby uneasy Sensations are produc'd. The *Toothache* too will happen, when a Defluxion of these sharp, corrosive Humors, falls upon their Roots, and irritates their Nerves.

*Pains in the Kidneys, Bladder, &c.*

*Toothache.*

I They

*Disturb'd Sleep.* They sleep but little, by reason of the Pains and uneasy Sensations over all their Body; or of the Irritation caus'd by the Heat, or Feverish disposition, when they are in the Hot fit: Another cause of their not sleeping, is, the terrible Dreams they have, which are caus'd by Heterogeneous Particles which mingle with the Spirits, ferment them in the *Emporium* of the Brain, and thereby renew the Images of past Objects; and particularly of those whose Impressions were latest, and most deeply imprinted in the Brain;

*Dreams.*

Hence we find by Experience, that a Man generally Dreams on what had made a deep Impression in his Mind the day before: And since those who are far gone in this Distemper, do generally think on what is Melancholy, Dreadful, and Perplexing; they are therefore molested with Terrible, and frightful Dreams.

*Melancholiness.*

*Lastly*, we find that those whom this Disease by Long-suffering has quite conquer'd, are oppress'd with a deep Melancholy, and anguish of Mind;



Mind; always reflecting on what can perplex and fright them most; And thus they fall into an Incurable Despair of Recovery, and are very angry with those who tell them there is any probability of it. This happens, because after long groaning under this Disease, and finding little Relief from various Remedies they have taken; but that the Distemper still encreases upon them; they reflect deeply upon their present Condition; think on, and exaggerate to themselves what they undergo; and what they apprehend will be the worst effect of the Distemper: And reflecting thus daily, and almost without Intermission upon the Unhappiness of their Condition, they at last imprint in their Brain so deep a Sentiment or Idea of their unfortunate Circumstances, that every little Motion which excites the Spirits, renews those Thoughts. Moreover, by the continual Attention to their Misfortunes, the Spirits are detain'd in the Brain, so think fixedly upon them, and consequently are distributed, but in a

*Despair of Recovery.*

small quantity into the other Parts of the Body; whereupon they become slack; the Blood loses much of the swiftness of its circular Motion, and by consequence its fermentation is abated, whence it follows, that the Particles which compose the Blood will approach each other, and it grows thick and incapable of separating the Recrements of the Body, and the Spirits in a sufficient quantity; as we constantly find it happens to melancholy People. Besides, a want of Spirits in the ferment of the Stomach hinders a good Concoction and Digestion of the Aliments: All which concur to the depression of the Volatile Parts of the Blood; and, to the formation of a gross, terrene, thick Constitution of Blood; from whence you may easily deduce all the Symptoms of a Melancholy Temper.

And thus I think I have given Mechanical, and I hope Satisfactory Reasons for all the Symptoms and Accidents of this Distemper: It remains now that I proceed to the Prognostick and Cure thereof.

CHAP.

## CHAP. IV.

*The Diagnosticks of Vapours.*

**A**S for the *Diagnostick* of this Distemper, it is known no otherwise, than by the Symptoms and Accidents which I numbred up in the first Chapter: Not that it is necessary they should concur all at a time, but that when any two, three, or more of them happen to a Patient by Intervals, and do not appear to be the Symptoms of any other Distemper, they are justly term'd *Vapours*: As for Example; if a Person is troubled with Belching of Sower, Sharp, or Insipid Fumes, with a Grumbling of the Guts, a Heaviness on her Breast, an Uneasiness after Meals, &c. and that these Indispositions come by Intervals, her Disease is *Vapours*. This is easie enough to be known: But what is most difficult in this Distemper, and to which the Physician ought chief-



ly to apply himself, is, to know the Constitution of the Patient's Blood, whether it be of a gross, thick Nature, difficult to ferment; or open and easie to be put into an Ebullition; For from thence he must take his *Curative Indication*, which ought to be of a quite different Nature, according to the Difference of the Causes: And hence it comes that the generality of Physicians have so little Success in the Curing of *Vapours*, because they Prescribe the same Remedies for all *Hysterick Fits*; whereas the same Symptoms, caus'd by different States of the Blood, require different Remedies: As for Example; A difficulty of Breathing, caus'd by a Coagulation and Stagnation of the Blood in the Lungs, demands Appetitive Attenuating Remedies, which may divide the coagulated Blood, and render its Circulation free and easie. But when this Difficulty of breathing is caus'd by a too violent *Ebullition*, and Rarefaction of the Blood, then such Remedies must be Prescribed, as will fix the Blood, and hinder its too violent Fermentation.

You

You may gather that the Blood is of a gross thick Nature, when at the beginning of the Fit, the Pulse is low and weak, so as to be almost imperceptable; when the Patient perceives a great Cold run up her Back, and all over her Body, and belches up sower or sharp Fumes. It is true, that even in a Constitution of Blood easy to be put into a violent Ferment, sometimes such sower Crudities are engender'd, as do cause the belching up of Fumes of the like favour, a Lowness of the Pulse, a Sensation of cold up the Back, and a Chilness over all the Body. But to find out and distinguish which of these two states of Blood it is, you must attentively examine the Pulse and Temper of the Patient, for in the latter Case, the Pulse is far more frequent, and the Patient of a bilious or melancholy Constitution; In the first, there is a much greater interval between every Pulsation, and the Constitution is sanguin or pituitous.

So that a Physician ought diligently to inform himself, whether at the beginning of every Fit, there

was a Lowness of the Pulse; a great Cold felt up the Back, and all over the Body; and whether the Patient came to herself without any augmentation of Heat or no: If so, then he may, with Reason, Judge that the Texture of the Blood is very gross and thick: But if during these Symptoms, he finds that the Pulse was more frequent than in the former Constitution, and that after them there succeeded a violent Heat, with a continuation of many of the same Accidents, or an addition of some new ones; he may infer, that tho' the Indigestions are of a fix'd Acid, or slower Nature, yet the Constitution of the Blood is more open than in the former state. Lastly, if the the smell of *Civet*, *Musk*, or *Amber*, makes them fall into Fits, he may immediately conclude that the Blood is very open, and the Salts thereof very easy to be put into a Ferment.

Moreover this Distemper being strangely Various, and Counterfeiting several other Diseases, chiefly the *Syncope*, *Apoplexies*, *Epilepsies* and *Convulsions*; I will give you the distinctive



distinctive Signs by which you may know them from any one of these Distempers.

You may distinguish the *Trance*, which happens in Hysterick Fits, <sup>Difference</sup> from a *Syncope*; first, because the <sup>between a</sup> *Syncope* lasts but a little while, where- <sup>Syncope</sup> as this *Trance* lasts sometimes several <sup>and Va-</sup> Hours or Days. Secondly, because a *Syncope* seizes on a suddain, where- as here there are always some proceeding Symptoms to be observ'd, upon a nice Examination. Thirdly, the Pulse is almost, if not quite imperceptible, in the *Syncope*; and in Hysterick *Trances*, tho' it is weak and low, yet it is far more perceptible. Fourthly in a *Syncope*, a cold Sweat always comes over the whole Body, which does not happen in these *Trances*: The Face is always Pale in the *Syncope*, but sometimes very Red in these Fits: In Vapours there are generally Convulsions; and in a *Syncope* always a Feebleness or Inability of all the Parts to perform any Motion, regular or irregular.

Tho' it be very difficult to distinguish some Symptoms of this Disease from

*Difference between an Apoplexy and Vapours.* from an *Apoplectick Fit*, (since the Patient lies equally Senseless and Motionless in both) yet by nice and diligent Observation, you will always find in these *Hysterick Fits*, some small *Convulsions* in the Hands, Feet, under Jaw, or Lips, or a fix'd Staring of the Eyes, which seldom happen in *Apoplexies*: tho' it be true that sometimes *Convulsions* do accompany *Apoplexies* too. Therefore the surest way, is to examine whether the Patient be subject to *Hysterick Fits* or no; if she be, you may judge it to be *Vapours* and no *Apoplexy*. Another Question to be ask'd, is, if she were Born of Parents subject to *Hystericks*; for *Vapours* as well as other Diseases, are transmitted to us from our Fathers and Mothers.

*Difference between Epilepsies and Vapours.*

I take *Epilepsies* and this Distemper to be the same Disease, and if there be any difference to be made between them, it only consists in this, that an *Epilepsie*, is *Vapours* arriv'd to a more violent degree; that the *Convulsions* are more general and more apparent over all the Body, and they Foam

at

at the Mouth much more than in *Hysterick Fits*.

And since Persons in this Distemper lie in *Trances* for whole Days, Motionless, and Senseless like Dead Bodies; (nay some have had the misfortune, as very Credible Authors assert, to have been Buried Alive in these Fits) it will not be amiss to give you some Signs whereby to know whether they be alive or not: First then, hold a very little fine Carded Wooll, a Feather, or burnt Paper before their Mouths; if these stir, it is a Sign they Breathe. Secondly, put a Glass brim-full of Water upon their Breast, which will spill if the Ribs make the least Motion. Thirdly, take a Looking-Glass, wipe it clean, and put it to their Mouths, which if it fullies, 'tis a Sign they Breathe; but what is most secure in this Case, and what I advise to be done to every one who is subject to *Vapours*, is, to keep them for three or four Days till they are sensibly perceiv'd to Corrupt.



## CHAP. V.

*The Prognosticks of Vapours.*

**T**HOUGH it does sometimes happen that the Accidents of this Distemper are so violent, as to kill the Patient ; yet generally speaking this Disease is not Mortal : However the extraordinary difficulty we find in Curing it, make it justly be term'd the Scourge and Reproach of Physicians.

*Why Vapours are so hard to be Cured.*

This Difficulty of Cure is occasion'd, first, because the Physician is not sent for, till the Disease is inveterate and habituated on the Body, and the Blood has contracted several Vices, which are now grown hard to be corrected. Moreover they generally have depriv'd Appetites, and indulge themselves during the Interval in eating things of bad digestion, which entertain the ill Disposition of their Blood ; and sometimes the course of its Fermentation, and the nature of its Salts, are so very uncommon, that it is hard to find Remedies effectual to the reducing of them to their

their natural Disposition : Again these Persons are for the most part possess'd with some Passion or deep Concern, which cannot easily be effaced out of their Minds ; which a Physician ought to examine well into, and endeavour by all means possible to find out : Because as long as the Mind is deeply intent upon any one thing, the Spirits are detain'd in the Brain ; and for want of them, the Blood and the Re-crements coagulate and forme Obstructions all over the Body, whence comes the Difficulty of Curing those, who have any deep Concern upon them.

As for the common Symptoms of this Disease, *viz. Grumbling of the Belly and Guts, Pains in the Back, Chilness, Suffocations, Belching, &c.* they are not much to be apprehended : since we see them daily happen without incurring any danger of Life. But still by how much the more violent and numerous these Symptoms are, the greater the Danger is : Especially, if there be a *Syncope*, and *Sleepiness*, and the Pulse be almost imperceptible, and the Difficulty of Breathing very Great ; for in these Accidents,

dents, if they be violent, and last for a considerable time, the circulation of the Blood may be entirely interrupted, and the Spirits so detain'd in the Brain, or drown'd in the serous Parts of the Blood, as utterly to abolish all the *Animal and Vital Functions*.

When *Vapours* are grown so violent as to become an *Epilepsie*, there is more danger than in common *Hysterick Fits*. Because they fall with greater violence, and are in danger of *breaking* their Head, an Arm, or some other Part.

*Convulsions and Palsy, bad Symptoms* The *Convulsions*, and *Palsy*, are very unwelcome Accidents, because it sometimes happens, that the Part which was in Convulsion, does not return to its natural Situation, when the Accident is over, and sometimes the *Convulsions* are so violent, that the Patient is in danger of breaking an Arm, or some other Part of his Body. The *Palsy* is a bad Symptom, because the part affected often remains *Paralytick* afterwards. Moreover, the cause of a *Palsy* being the Obstruction or Relaxation of the Nerves, there is a manifest danger of an *Apoplexy* ensuing.

*Note,*



*Note*, First, That this Distemper is far more difficult to cure in old People, than in young Men and Women.

Secondly, That when they *Foam* much at the Mouth, and the *Paroxysm* uses to continue for a very long time, there is more danger than otherwise.

Thirdly, that Melancholy in Hysterical People is easily cur'd in the beginning, but when it has taken deep root, and the Patients avoid and shuns Company, then it is hard to be cur'd: Nay it is to be fear'd they will endeavour to make themselves away: and if this Melancholy has so alter'd them, that they will not speak to, or answer others, it is much to be feared they will fall into a *Melancholy Madness*.

Fourthly, that Young Women who are Afflicted with this Disease, are generally Cured of it (without taking any Remedies) as soon as they begin to Breed.

Fifthly, that *Vapours* are dangerous if they seize upon Women in Child-bed, or for some time after their Labour.

Sixthly, that if a Patient Sneezes whilst she is in *Hysterick Fits*, 'tis a good Sign. *Hippocrates Aphorism. 3. 35.* because it shews that the *Diaphragm* has Liberty to contract it self; and therefore the Difficulty of Breathing is not so great, and will soon be over.

## CHAP. VI.

*The Cure of Vapours.*

**F**ROM what has been said in the preceding Chapters, it is Evident that the Indication in the Cure of this Disease, is to remove the Crudities and Indigestions which lie in the Guts and Stomach; to correct the Vices which its Ferment hath Contracted, and cleanse the Blood of those vicious Salts which pervert its Natural Dispositions; as also to take away Obstructions, and appease the turbulent Motions of the Spirits. For which end, the Physician, before he Prescribes any Remedies, ought seriously to examin whether the Constitution of his Patient, and the Nature of the Disease be such as might have render'd the Blood Thick, Gross, and Difficult to Ferment; or Open and easy to be Exagitated or put into an Ebullition. Again there are certain Remedies which appease and allay the Symptoms for the present; and others, which, tho' they give no immediate Ease, strike at the Root of the Distemper; and are proportion'd to the Entire Extirpating of it. Wherefore I will lay before you, the respective Remedies which are proper in these different Constitutions, both in the *Paroxysm*, and during its *Interval*.

Supposing

Supposing then that a Physician is sent for to a Patient, who is actually in a *Fit of Vapours*, caused (as he gathers from the Symptoms) by a thick, gross Constitution of the Blood, and finds her in a *Trance* or *Syncope*, The properest Remedies in this case, are, to throw *Cold Water* on her Face, to burn *Leather*, or *Feathers*, under her Nose, to make her smell to the Oyl of *Petroleum*, *Galbanum*, *Assa Fætida*, *Spirit of Salt Armoniack*, *Spirit of Urine*, or some other such stinking things, whose Fumes being carry'd into the Lungs, together with the Air we inspire, do, by their Volatile Salts, divide and attenuate the *Blood*, the Coagulation and Stagnation whereof in the Lungs produced this Accident: for these Spirits do cause such a brisk *Fermentation* in the *Blood*, and are so very congenious to the Animal Spirits, that they excite them in us, when Torpid and Languid, and supply them when wanting. A Physician may also order *Euphorbium*, *Tobacco*, or *Ellebore* in powder to be blown up her Nose through a Quill, which by making her Sneeze,

K                      will



will help to liquifie the coagulated *Blood*; and for the same end, others order them to be pulled by the Hair, or violent *Ligatures* to be made in various parts of their *Bodies*, or *Con-tortions* of their *Fingers*, or the Soles of their Feet to be tickled: And many other like Remedies, which all help towards the Division, Volatili-sation, and brisker Circulation of the slow stagnating *Blood*; as also *Vo-mits*, and *Emetick Clysters* do, which often produce very good Effects in this Distemper.

So much for outward Applications. As for Interior Remedies, as soon as you can make her swallow, give her any one of the following Juleps once in six hours, as long as the *Fit* continues.

*Julep.* Take *Carduus water*, and *Burdock-water*, of each three ounces; powder of *Vipers* one scruple; Spirit of *Salt-Armoniack* twenty drops; and of *Castor* eight grains, (which may be augmented to fifteen if occasion requires it) Syrup of *Clove-gilly flowers* half an ounce.

O R,

## *Hysterick Fits.*

131

O R,

Take Penny-royal and Rue-water, of each two ounces; of compound Briony-water one ounce; Tincture of Castor fifteen drops; Syrup of Mugwort half an ounce.

O R,

Take Carduus-water, and Scabious-water, of each three ounces; Spirit of Salt-Armoniac thirty drops; or Salt of Vipers thirty grains; of Castor fifteen grains: Syrup of Clove-gilly-flowers half an ounce: shake these well together, and drink of the Julep.

If the Physician finds the Patient in a *Fit* like unto an *Apoplexy*, besides the External Remedies now mentioned, it will be sometimes necessary to use more violent ones, as *Scarifications*, *Blisters*, *Burning the Extremities of the Fingers or Toes*; from which parts, as being full of Nerves, violent Motions of the Spirits are caus'd up to the *Brain*, and from thence they are determin'd into various parts in a greater quantity, and thereby excite a brisker motion in the *Blood*.

K 2

When

When there is so great a Coagulation of the *Blood*, that these Remedies can produce no Effect, and the Physician has reason to fear the Patient will dye in the *Fit*, he may then try a last Remedy, which is, to heat a Fire-shovel red-hot, and hold it to the Head at a convenient distance : this seldom fails of wakening the sick Person, and tho' it cures her not, yet it gains her some Moments, which are very pretious in this conjuncture, for the settling of her Concerns, both as to this, and the next World.

If the Physician finds the Patient in violent *Convulsions*, like to the *Fits* of an *Epilepsie*, he must prescribe the abovemention'd Remedies, to divide and attenuate the thick gross Blood, as also *Laudanum* to quell the Inordinate Motion of the Spirits ; and moreover a Gag ought to be put between her Teeth, least she should bite her Tongue, and she must be placed where there is no danger of falling, because by the violence of it, she might easily break an Arm, or a Leg.

Now



Now if the Patient falls into a *Swoon*, *Apoplexy*, or *Convulsions*, during the Hot Fit, which succeeds the Cold, let her blood immediately, to prevent the bursting of any blood-vessel, and by the diminution of the quantity to abate its Effervency, and make it circulate more free and easie through the Lungs. Sometimes the Symptoms are so very violent in a Hot Fit, that it is necessary to let her blood in the Foot, Ingular Vein, or in both Arms at once, for no other reason, but to take away a greater quantity of Blood in a less time: and inwardly you must give her, as soon as she is able to swallow it, one of the *Fuleps* prescribed above, thereby to dissolve what part of the Blood was left coagulated.

These Remedies a Physician may make use of according to his Judgment, in *Fits* that are very violent: for when the Symptoms are moderate he need not prescribe any thing, unless he pleases to order the smelling to stinking Scents, as Spirits of *Salt-Armoniac*, *burnt Feathers*, &c.

When the Patient falls into *Raving Fits*, you must take away a greater quantity of Blood, and give much more *Laudanum*, and the following *Julep* twice a day, as long as she continues in this disorder.

Take *Plantain* and *Burrage-water*, of each three ounces ; or of *Aqua Lactis Alexiter* six ounces, *Crabs-eyes* and *Red-coral* prepared, and beaten to powder, of each one Scruple ; *Syrup* of *Maiden hair* three drams : To the *Morning Dose*, add three drams of *Syrup* of *Poppys* : To the *Night Julep*, one or two grains of *Laudanum*.

When the most violent Symptom is a *Suffocation* only, she need not take any thing during the Fit, but when she is able to swallow, the Physician may, if he thinks fit, give her an *absorbent Julep*, with a dram of *Jesuits-bark* in it, to correct and allay the Fumes which arise from the Stomach.

These Remedies are only to allay the Symptoms, and give present ease. The principal ones which are to Eradicate the Cause of this Distemper, and restore the Blood to its Natural Con-

Constitution, are to be taken during the Intervals. The Indication of which Remedies ought to be such, as to *Absorb the fix'd Acids*, and *correct the vitious Ferment of the Stomach*, to *take away Obstructions*, and to *divide, attenuate*, and raise such a Volatile Lively Ferment in the Languid, and Vapid Blood, as to make a due and just Separation of all its Recrements, but chiefly of the Animal Spirits. Which Indications cannot be fulfilled, but by the Concurrence, and long Continuance of various Remedies; for he who will pretend to cure this Distemper, long habituated on the Body, by one or two violent Remedies, in a short time, might as well pretend to build *Rome*, or Change the Genius of a whole Nation in one day. For vitious qualities which have by little and little taken Root in the Blood, cannot be extirpated but by almost Insensible Degrees.

First then, let the Patient be Blood-<sup>Reasons for</sup>  
ed, for tho' to the generality bleeding <sup>Bleeding.</sup>  
may not seem necessary, because in  
this case where the Blood is Thicken'd  
there is no Rarefaction, or violent



Effervency of it, or Repletion of the Blood-vessels, as in Fevers ; yet the Obstructions of several Bowels, and Parts of the Body, hinder the free Circulation of the Blood, which bleeding renders more brisk, as well as Augments its Fermentation for the present. Moreover *Aperitive* and *Attenuating Remedies* are to be made use of, which do stir up the Salts of the Blood, and put them into a greater ferment, whereby a too violent distention, or bursting of some Blood-vessels may be caus'd, which Bleeding prevents : But chiefly because it gives other Remedies, a more free and easy entrance into the Blood, and because we find by Experience, that they produce their Effects sooner and better after it.

*Vomits.*

The second Day prescribe her a *Vomit*, (of an ounce of *Emetick-Wine*, a dram of *Salt of Vitriol*, or of *Hypocruanna*,) thereby to cleanse the Guts of its *Saburra* or vitious slime, which lies in its Folds, and Wrinkles, which moreover by the violent contractions it causes, Divides, and Attenuates

tenuates the Blood, and concurs to the removing of Obstructions.

There are some Circumstances which conterindicate Vomiting, (tho' otherwise very beneficial in this Distemper,) as when the Patient is very weak, and difficult to vomit; and some others of like nature, which will hinder a Judicious Physician from ordering it.

Next day Purge with Two Scruples of *Extractum Rudii*, or what other Purge the Physician shall think most proper.

I do not approve of Sydenham's Method of Purging Three or Four Mornings together, in the beginning of the Cure; one *Purge* is then necessary to cleanse entirely the Stomach and Guts of that vitiated Slime, and Saburra, which lies in them; as also to carry off some small part of these Salts, which pervert the Natural dispositions of the Blood, but a Reiteration of them is prejudicial; for unless the Blood (which is generally very thick in this Distemper) be first divided and attenuated by Altering Remedies, the most violent Purges, as

as it has ever been observed even by the Ancients, have no Effect upon them; but on the contrary, by bringing away nothing but the Serous Lymphatick parts of the Blood, they give it a greater Consistence, and thereby encrease the Distemper.

Two or three days after these general Evacuations, I prescribe Attenuating Remedies, to disunite, and divide the strict Coherence of the Sulphurous Parts of the Blood; which Rendering it more Open, give an easier entrance to Absorbent Remedies which come afterwards.

For this intent I order *Aperitive Broths* to be taken for Ten, Twelve, or Sixteen days together, stronger or weaker, with, or without *Rhubarbe*, according to the Violence of the Disease and Constitution of the Patient; and, if I find no particular Reason for the contrary, I Purge in the Middle, and at the end of these Broths. For tho' that great Practitioner, Dr. Sydenham, positively affirms, that if in a Course of *Steel*, he should give but one Purge, he should totally undo all he had done before; I must beg his pardon



pardon if, convinc'd by Experience, I am of a contrary Opinion. And I have observed for several years, in the University of *Montpellier*, that Dr. *Barberat* and *Chirac*, the most Celebrated Practitioners of that Country, (as it is also the Practise of the Eminentest Physicians in *London*, to Purge in *Chalibeat* courses) did not only Purge their Patients twice or thrice during a Steel Course, but also mingled *Rhubarbe* with every dose of Steel; and yet I believe there is not a Town in the World of its extent, where half so many People enter into Steel Courses, and where they are so generally cured.

The Broths are made as follows.

Take Roots of *Butchers-Broom*, of *Aperitive*  
*Sharp-pointed-Dock*, of *Elecampain*, and *Broths.*  
*Eringo-Roots* of each half an Ounce;  
*Roots of black Helebore* Two Drams;  
of the Rust of Iron ty'd up in a Linnen  
Rag half a Dram; boile these together  
with half a Pallet, or a quarter of a  
pound of Mutton, in a quart of Water,  
till one third part of the Water is boiled  
away; then put in *Leaves of Burrage*,  
*Fumitory*, and *Maiden-hair*, of each a  
small

*small handful; let them boil for a quarter of an hour longer, strain it and drink a Porringer of it early in the Morning, and stir much about after it.*

The four first days I ordinarily put into every broth half a dram of *Rust of Iron*, as here prescribed; in the four next Two Scruples, or a whole dram; and afterwards Two Scruples or a dram of *Crocus Martis*, prepared with *Salt Armoniac*, or of *Mynsicht's Tincture of Iron* Twelve drops, which are stronger and more operative than the common *Rust of Iron*. For Persons who are naturally very costive, I put into every Mess of broth half a dram of *Rhubarbe*.

These sort of Broths, tho' something loathsome to the Taste, do generally produce better Effects than the same Remedies in any other form; because thus they are more of the Nature of the Aliments we daily take, and mingle more entirely with the Blood, and affect the Stomach for a less time.

Now when by the means of Attenuating Remedies, I have loosen'd, as I many say, and open'd the thick compact

compact Texture of the Blood, so as to give entrance into it for Remedies of a more gross and terrene nature; I prescribe Alkaly Medicines, as being proper to absorbe the fix'd Acids which caused the disorder in the Blood, and are now a little exalted by the preecedent Remedies, such are *Pearls, Mother of Pearl, Oyster-shells, Coral, Crabs-eyes, Jesuites-Bark, &c.* to these you must always joyn *Steel*, as being the Chief and most Effectual Remedy in this Distemper.

Wherefore I prescribe the following Electuary.

*Take Conserve of Roman-Wormwood* Electuary.  
*one Ounce and a half, Confection of Al-*  
*kermes half an ounce, of Jesuites-bark,*  
*Crabs-eyes, and Red-Coral prepared and*  
*beat into a fine Powder, of each two*  
*drams; of Steel prepared with Salt-ar-*  
*moniac three drams, of Extract of black*  
*Hellebore four Scruples; make these up*  
*into an Electuary, with a sufficient*  
*quantity of Syrup of Oriental Pearl; of*  
*which let the Patient take the bigness of*  
*a Walnut every Morning, or half that*  
*quantity at twice, viz. in the Morning*  
*early, and at five in the Afternoon,*  
*drinking*



drinking immediately after it four or five Spoonfuls of the following Julep.

Root of  
black Hel-  
lebores, spe-  
cifick in  
Vapours.

And here I would have you take notice, that there is no one Simple more Sovereign in the Cure of Hysterical and Hypochondriacal Distempers, than the Root of *Black Hellebore*, if rightly made use of.

Julep.

Julep.

Take of Cordial Milk-water eight ounces, of compound Briony, and compound Peony-water, of Mint-water, and water distilled from the leaves of Wake-robin, of each one ounce; of Cinnamon barley-water two ounces; of compound Spirit of Lavender, and Tincture of Castor, of each two drams; Syrup of the Rind of Citrons two ounces.

This Electuary, with its Julep, must be continued for ten, fifteen, twenty days, according as the Physician shall judge fit, and for the most part it will be requisite to Purge in the middle, and after having ended it, tho' sometimes it will suffice to Purge at the end only.

And tho' it always happens at the beginning, and generally throughout the whole Course of Steel Remedies, that

that they cause great disorders, both in the Bodies and Minds of *Hysterick Women*, yet they must not be left off, but diligently continued, as the only Remedy that can effect their perfect Cure.

Besides what I have already prescribed, it will be necessary they have always by them, an *Anti-hysterick mixture*, or *Julep*, of which they may take four or five Spoonfuls whensoever they find themselves Squeamish, Faintish, Drooping, or otherways out of order. You may compose it thus.

Take Black-cherry-water six ounces; <sup>Consolid</sup> compound Briony, and Penny-royal-water, <sup>Julep</sup> of each three ounces; Tincture of Castor three drams; of Cochenelle one scruple.

When the Disorder is very great, you may mix thirty or forty drops of *Sal volatile oleosum*, and compound Spirit of Lavender, with four or five spoonfuls of this Julep.

Some from the very beginning apply to the Navel a Plaister, made of one ounce of *Galbanum*, and of *Carranna* and *Tacamahaca*, of each one dram.

During

During the whole course of these Remedies, I would advise her to drink nothing but true natural *French Wine*, with water ; into every glass of which, let her put twenty, twenty five, or thirty drops of a mixture of three drams of *Sal volatile oleosum*, and one dram of *compound Spirit of Lavender*.

Glysters also composed of Aperitive Roots, and Herbs, and Chalybeat Preparations, do produce extraordinary good Effects in this Distemper.

After these Remedies are ended, and she has reposed her self for some few days, send her to *Tunbridge*, or some other Waters of the same nature ; which being impregnated with Particles of Iron, extracted from the Iron stone, through which they pass, do produce the same Effects (and that more naturally) which our Chalybeat Preparations do.

Afterwards let her go to the *Bath*, which gives great ease in this Distemper, because the Acrimonious Salts of these Sulphurious Waters, liquifie and dissolve the Blood in such a manner, as to excite a brisk, lively Fer-



Fermentation in it, whereby a larger quantity of Spirits are supply'd to the Brain, and the grosser terrene parts are carry'd off by Stool. Another reason why there is so much benefit reap'd at these Waters, is, that when the Patient goes thither, she, by the advice of her Physician, sets aside all Concerns and Cares, and gives her self wholly over to Mirth and Pastime, whereby the Blood is invigorated and rendered more lively, the Concoction of the Aliments, and all other Functions of the Body are performed in a more laudable manner.

During all these Remedies, she will do well to take (every day, or every other day) just before Dinner, a Knives point-full of powder of *Rhubarb*, or as much *Elixir Proprietatis*, in a spoonful of Broth, which will help much the Digestion, and hinder the engendring of Crudities.

All these same Remedies ought to be reiterated in the *Autumn* and *Spring*, if she be not perfectly cured before; and in the Interval of those Seasons, let her take every Morning

L

the

the bigness of a Nutmeg of the following *Electuary*.

*Electuary.* Take of the rust of Iron half an ounce, of Jesuits Bark, Crabs-eyes, and Red-coral prepared and powdered, of each two drams, Salt of Wormwood half a dram, Syrup of Wormwood as much as suffices to make it into the consistence of an *Electuary*, drink after it five or six spoonfuls of the *Julep* prescribed above.

This is an excellent Remedy, and I know a very eminent Practitioner, who by the continuance of it alone, has cured numbers of *Hysterical Women*.

After all these Remedies have recovered the Patient of her *Hysterical Symptoms*, the Physician may, if he finds any *Acrimony* or Sharpness remaining in the Blood, give her *Crasibroths* for ten or twelve days, than which there is no greater Sweetner of the Blood; and afterwards put her into a *Milk-Diet*, and order her to Bathe for a Month or two.

*Rules of Diet.*

They must live as temperately as possible, eat no Cheese, Ragouts, Pyes, spiced or sugar'd Meats, nor Fruits; but

but if they have a particular longing for any one thing, which is not absolutely contrary to their Distemper, by all means let them have it, for it generally happens that they long for such things as will best agree with the Ferment of their Stomach; and I hold it for one of the best Rules in Physick, always to content the Patients, where it can be done without doing them any Prejudice: They must eat little at nights, and endeavour, as much as possible, to keep their minds free from all Cares and Concerns, and to be merry, and pass their time in Divertisements: As for Ladies who live in a large City, I would advise them to take the Air in their Coaches once or twice a day, for an hour or two at a time, and if they can bear it, to take it on Horseback or a-foot; it is unconceivable how much Riding, and Walking much about, in a clear fresh Air, enliven the Blood of those who are used to a Town-life; let them, above all things, avoid all violent Passions.

As for their *Drink*, small Beer is positively nought, Ale, and strong *Their drink* Beer,



Beer, I do not approve of neither, unless brewed with *Wormwood*, or *Gentian*; the best drink in this case is natural Wine mix'd with Water, in which they may now and then put some drops of *Sal volatile oleosum* mix'd with Spirit of *Lavender* as above. And for those who are not accustomed to Wine, the drinking of it alone in such Women, has often cured them of this Distemper, and of the Green sickness.

Note, that when no Hot Fit succeeds the Cold, the Blood is more thicken'd and coagulated, than where a Hot Fit succeeds; and consequently the *Aperitives* ought to be stronger, and continued for a longer time.

As for the other Constitution, in which the Blood is very open, and apt, upon light occasions, to be violently exagitated, the Cure must be different in it, from what it was in the former; for here Remedies are to be prescribed, which may allay the extraordinary Ebullition of the Blood, whereas in the other, we order such as can excite a more brisk and lively Fermentation in it.

Supposing

supposing then a Physician is sent for to a Patient, whom he finds in a Fit like to an *Apoplexy*, which he gathers by the *Symptoms* and *Accidents*, to have proceeded from too great an Effervency of the Blood; immediately he must order her *Bleeding*, *Scarifications* or *Cupping*, and moreover, make her drink a great quantity of cold water, or Limonade in Ice.

If she be in a *Phrenzy*, or *Raving Fits*, blood her in the Jugular Vein, or in the foot, and give her a great deal of cold water, or Limonade, and *Laudanum* in cooling Emulsions Morning and Night.

If she lyes in *Convulsions*, order the same Remedies, but blood her less

In all these cases give Emulsions made of cold Seeds, twice a day, into that which she takes in the Morning, put three drams of *Poppy-water*; in that for Night, dissolve a grain of *Laudanum*.

If the chief Accident be a *Suffocation*, as soon as she can swallow, give her a Julep composed of *Testa-*

teous absorbent Powders, Jesuits bark, and *Aqua Lactis Alexiteria*.

But if it be a *Swooning*, which seldom happens in this Constitution, throw Water in her face, put Vinegar up her Nose, make her drink a great quantity of clear Water or Limonade, as soon as she can be made to swallow ; and when the Accident is over, if the *Pulse* grow strong and high, give her some refreshing cooling Julep ; but if Low and Languishing, the following is most proper.

*Julep.*

*Julep.* Take Black-cherry-water, and Carduus-water, of each three ounces ; powder of Vipers half a dram ; Syrup of Maiden-hair half an ounce ; mingle them well together, and drink it off immediately.

As for the Remedies which are to be given in the Interval of the Paroxysm, for the entire Cure of the Disease, it is evident they ought to be such, as can give a consistence to the Blood, and appease its violent Fermentation : but since in this Distemper, there are always some Obstructions of the Bowels, (the Retention



tion of whose Recrements in the Blood, causes this preternatural Fermentation,) we must first give Aperitive Remedies to remove these Obstructions, and afterwards proceed to such as can temperate the Sharpness of the Blood, sweeten it, and reduce it to a natural, gentle and quiet motion.

First, let the Patient be bled two or three times, according to the greater or less Effervency of the Blood; for here it is requisite to empty the Blood vessels more, than in the other Constitutions; both, because the Ebullition of the Blood itself is far greater; as also, because the Aperitive Remedies which must be given, finding an open Texture of Blood excite a greater Fermentation and Rarefaction in it, whereby the Risk of bursting the Blood vessels is greater.

Next day let her take a gentle Vomit to cleanse the Stomach and Guts of the *Saburra* which lyes in them. The day following a gentle Purge, without *Cassa* or *Manna*, because they generally make Hysterick

Women to fall into *Fits*, instead of giving them ease.

Take, for Example, an Ounce of *Cream of Tartar*, which dissolve in two large glasses of any appropriated Liquid.

Within two or three days begin to take *Aperitive Broths* made thus.

*Aperitive  
Broths.*

Take *Knot grass*, and *Succory roots*, of each one ounce; the *Leaves of the same Plants*, of *Maiden hair*, and of *Harts tongue*, of each half a handfull; of *Iron made rusty by the Juice of Renet-apples*, hal a dram: Boil these in the same manner as above ordered, with a quarter o. a pound of *Veal*.

Continue them for twelve Mornings, Purge the seventh and fourteenth day.

Then take the following *Electuary* for ten days.

Take *Powder of rusty Iron prepared with the Juice of Renet apples*, three drams; *Conserve of Roman Wormwood*, and of *water Trifol*, of each one ounce; of *Crabs-eyes*, *Perle*, and *red Coral prepared*, of each two drams; make these up into an *Electuary*, with a sufficient quantity o. *Syrup of Maiden hair*: Of this

this take the bigness of a Walnut every Morning, or of a Nutmeg twice a day; and after it take four or five Spoonfuls of the Julep prescribed above for the same use, only let it have but half that quantity of Spirit of Lavender, and of Tincture of Castor.

After this purge her again, and then send her to Tunbridge, or some other Iron Waters; the Bath I am afraid would be too hot for her, but that her Physician must be judge of. When she is return'd home, give her *Crasib* Broths for a fortnight, which is a most excellent sweetner of the Blood; and afterwards put her into a *Milk-Diet* for two Months; she may also Bathe, if her Physician finds no reason for the contrary.

Next *Spring* and *Autumn*, if she be not perfectly recover'd before, let her take the same Remedies over again: And in the Interval of the Seasons, let her take every Morning the bigness of a Nutmeg of this *Electuary*.

Take Powder of rusty Iron, prepared *Electuary*:  
with the Juice of Rennet apples, three  
drams; Coral, Crabs-eyes, and Mother  
of



of *Perle* in powder, of each two drams; of yellow *Amber* one dram; make them up into an *Electuary*, with a sufficient quantity of *Syrup of Maiden-hair*.

Several eminent Physicians have found, to my knowledge, great Effects from this Remedy; and for those who are troubled with no other Symptoms but *Indigestions*, *Winds*, and some little Pains and *Uneasiness* which proceed from thence, a Continuation of this *Electuary* alone, with a careful regular Diet, and using a moderate quantity of true natural *Wine* instead of Malt drinks, seldom or never fails of setting them to rights.

Their way of living, as to Diet, ought to consist chiefly of cooling refreshing Nourishments, and of such as may give the Blood a greater Consistence; such are *Water-gruel*, *Barly*, and *Rice-broth*, *Rice-milk*, boil'd and roast *Veal*, and *Mutton*; *Veal* or *Chicken-broths* not made so strong as usually; she must eat no Salt or spiced Meats, *Pyes*, nor *Ragouts*, because they will enflame the Blood, she may be allowed the eating of  
some

some Fruit, to wit, *Rennet-apples*, *Kentish Cherries*, and such others which have a *sharp taste* and abound with *Acids* whereby the Blood is cooled, and its Fermentation somewhat abated.

Her Drink should be natural *French Wine*, but in less quantity, and with more Water, than in the other Constitutions, because the Blood is more apt to be put into a violent Fermentation. She must avoid all Concerns, Anxieties, and Passions, but above all things, divert her self, as much as possible, with what is most pleasing, and suitable to her Genius; as seeing of Plays, frequenting Merry Company, taking the Air in the Parks, where besides the benefit of the fresh Air she receives; the variety of different Company, and Objects, which she sees, concur to pleasure her Mind, and remove all Anxious Thoughts, and thereby contribute much towards the Cure. For upon diligent search and enquiry, you will almost always find, that those who are troubled with Vapours, have some deep Passion or Concern upon them,

them, which renders them Pensive and Thoughtful : Wherefore the Physician ought to consider attentively the Circumstances of his Patient, and to inform himself of her acquaintance, what may be the cause of her Concern, which having found out, he must, with the aid of her Friends and Relations, facilitate to her, the means of obtaining what she desires. I know an eminent Practitioner who assured me, he has found better Effects from this Method alone, than from most other Remedies that can be prescrib'd in this Disease.

Two very considerable Cures I my self saw him do in this nature ; one was of an ancient Gentlewoman, who used to lye for two Months together in violent Fits, seldom being able to get the least repose ; all the Remedies she had taken for two years and a half, were ineffectual ; but the Doctor had no sooner found out what it was that troubled her, and put her into a way of obtaining what she so passionately desired, but all her violent Symptoms were abated to a Miracle, and in two or three Months,



Months, with the taking of a few almost insignificant Remedies, she perfectly recover'd.

Another I saw him cure in the like manner, who used to lye for whole Months together in such violent Convulsions and Ravings, that she had hardly so small an Abatement, as to let her take what Food was necessary for the Sustenance of Life.

Sometimes the Suppression of the *Lochia* in Women after Child-birth, causes *Hysterick Fits*; and sometimes they are caused by the immoderate Flux of the Menses, either in or out of Child-birth; in both these cases they are cured by the respective Remedies, which are proper for these different Distempers.

Sometimes they are seized with a *Cholick* and a violent *Looseness*, which must be appeas'd by *Laudanum* and other appropriated Remedies.

*Sydenham* says, that *Venice-Treacle* alone, if continued for a good space of time, is perchance the most effectual Remedy in this Disease: He also adds, that *Jesuit-bark* alone, continu'd to be taken Morning and Night for some

some time, has restor'd many desperately Ill, especially those who suffered violent Convulsions. I own I have not made much use of either of these Remedies, as knowing others which I judge to be more effectual, and which I have found to have very good success: However, the nature of these Remedies being, what seems very well appropriated to the Cure of this Distemper, I have so much deference to *Sydenham's* Experience and Sincerity, as to believe they deserve that extraordinary Character he gives them.

---

F I N I S.







---

---

A  
TABLE  
OF THE  
CHAPTERS.

Chap. I. **T**HE Symptoms and Accidents of Vapours Page 1

Chap. II. The Causes of Vapours p. 10

Chap. III. A Mechanical Explanation of the Symptoms and Accidents of Vapours p. 33

Chap. IV. The Diagnosticks of Vapours p. 117

Chap. V. The Prognosticks of Vapours p. 124

Chap. VI. The Cure of Vapours p. 128

M

THE

# T H E CONTENTS.

<b>A</b> N Enumeration of the many Symptoms and Accidents of Vapours	Page 3 to 10
Analytical Proofs of the Causes of Vapours; and first, that none of the six Non-natural Causes of Distempers are the immediate cause of Vapours	P. 10
Nor the solid parts of Mans Body	P. 11
Nor the Blood	ibid.
Nor any of the Recrements of the Body	P. 12
Nor the Womb	P. 14
Nor Vapours rising from the Womb	ibid.
Nor is the Disorder of the Spirits the ad- equate cause of Vapours	P. 15
Nor the Chyle	P. 19
Nor the Ferment of the Stomach or Guts, nor the Gall	ibid.
The true Causes of Vapours are Crudities and Indigestions	P. 20
The remote Causes of Vapours	P. 22
Three different Constitutions of the Blood to be remark'd in Vapours, from p. 23 to p. 25	
The disorder of the Spirits is the immediate cause of some of the Accidents, but not the adequate cause of Vapours	P. 31
	Why



# The Contents.

*Why Women are more subject to Vapours than Men* p. 32

*In what manner the Heaviness on the Stomach is produced* p. 33

*Sensation; what it is, and how 'tis caused* p. 35

*From whence arises the difference in Sensations* p. 36

*The Grumbling of the Guts, from whence* p. 37

*The Mechanism of Vomiting, from* p. 39 to 46

*Whence the difficulty in breathing* p. 46

*Whence a rising in the Throat* p. 47

*Why the Patients struggle* p. 49

*Why they cry and groan* ibid.

*How a Giddiness or Vertigo is caused, from* p. 49 to p. 54

*In what manner the Spirits move in Mans Body* p. 52

*Proofs of a deficiency of Spirits in the Giddiness* p. 54

*The Dimness of sight, from whence* p. 57

*Why they close their Eyes* ibid.

*The Mechanism of the alternate motion of the Eye-lids* p. 58

*Paleness, from whence* p. 60

*Why they fall down* p. 61

*Remembrance, what* p. 62

*In what manner the Patients come to themselves again* ibid.

*Why they fetch a great sigh at that time* p. 63

*Swelling of the Belly* p. 64

*Distention of the Hypochondria's* ibid.

# The Contents.

<i>How that Tumour is caused, which the An-</i> <i>tients took to be the Wombs changing it self</i> <i>from place to place</i>	p. 65
<i>What occasions the Cold they feel up their</i> <i>backs</i>	p. 67
<i>What occasions the Headache in the cold Fit</i>	p. 68
<i>How the Palpitation of the Heart and Syn-</i> <i>cope are caused in the cold Fit</i>	p. 69
<i>Why some return quietly to themselves after</i> <i>the Cold, and in others a Hot Fit succeeds,</i> <i>with many violent Accidents</i>	p. 70
<i>How the Palpitation of the Heart, difficulty</i> <i>of breathing, and Headach, are caused in</i> <i>the Hot Fit.</i>	p. 72
<i>From whence the Giddiness in the Hot Fit</i>	p. 73
<i>Why a Drowsiness in the Hot Fit</i>	p. 74
<i>From whence the Flushing arises</i>	ibid.
<i>Raving, from whence</i>	p. 75
<i>In what manner the Contraction of the Mus-</i> <i>cles is caused</i>	p. 76
<i>Whence Convulsions</i>	p. 78
<i>From whence the Foaming at the Mouth</i>	ibid.
<i>Why the Arteries beat with greater violence</i> <i>than usually</i>	ibid.
<i>Why a beating in the Tendons and Muscles</i>	p. 79
<i>Whence a Tingling in the Thighs</i>	p. 80
<i>Quickness of the Pulse, from whence</i>	p. 81-83
<i>Why the smell of Civet, Musk, Amber, &amp;c.</i> <i>causes Vapours in some Persons, and in</i> <i>whome</i>	p. 84
	<i>Why</i>

# The Contents.

<i>Why a Passion puts the Blood in a violent Ferment</i>	p. 85
<i>Why upon a Commotion of the Mind, Urine shall be voided clear, and in great quantity</i>	p. 87
<i>The Mechanism of Breathing, from p. 90 to 95</i>	
<i>Examples to prove the Spring of the Air</i>	p. 92
<i>Why some Patients fall into Fits of Crying</i>	p. 96
<i>Why they shreek out, or make inarticulate Mutterings or Sounds</i>	p. 97
<i>Why they fall down</i>	p. 98
<i>Why they burst out into Fits of Laughing</i>	p. 99
<i>Violent Struggling, from whence</i>	p. 100
<i>How they live for a long time without any signs of breathing</i>	p. 101
<i>From whence the Pain under their Hearts</i>	p. 104
<i>From whence the Body takes its colour</i>	p. 105
<i>How a deprav'd Appetite is caused</i>	ibid.
<i>From whence the Irritation call'd Hunger</i>	106
<i>Why the Patients love Trash, as Chalk, &amp;c.</i>	107
<i>Violent Coughing, from whence</i>	ibid.
<i>Tawning, in what manner 'tis occasion'd, and why</i>	p. 108
<i>The stretching out of the Body</i>	p. 109
<i>Why some spit much, and thin</i>	p. 110
<i>Pain on the top of the Head, from whence</i>	ibid.
<i>Pains in the Kidneys, Bladder, &amp;c.</i>	113
<i>The Toothache, from whence.</i>	113
<i>Disturb'd Sleep and Dreams, from whence.</i>	114
<i>Why they are Melancholy, and despair of their Recovery.</i>	115
	What



# The Contents.

<i>What is to be observ'd particularly in the beginning of the Cure.</i>	118
<i>Why Physicians have so little success in Curing Vapours.</i>	118
<i>How to distinguish the different Constitutions of the Blood in this Distemper.</i>	119, 120
<i>How to distinguish a Trance of Vapours from a Syncope</i>	121
<i>How to distinguish Apoplexies from fits of Vapours.</i>	122
<i>The difference between Epilepsies and Vapours.</i>	122
<i>Why Vapours are so hard to be Cured.</i>	124
<i>Convulsions and Palsy bad Symptoms.</i>	126
<i>Outward Remedies proper in a Trance.</i>	129
<i>guleps.</i>	130, 131
<i>Outward Remedies in Fits like to an Apoplexy</i>	
<i>In Convulsions what is to be done.</i>	132, 133
<i>In Raving Fits what's to be order'd.</i>	134
<i>Reasons for Bleeding</i>	135
<i>Why Vomits, and in whom they must be omitted</i>	136
<i>How often they must Purge</i>	137
<i>Purge in Steel Courses</i>	138
<i>Aperitive Broths.</i>	139
<i>A Steel Electuary.</i>	141
<i>Root of Black Hellebore specifick in Vapours.</i>	142
<i>Cordial Antihysterick gulep.</i>	143
<i>A Plaister for the Navel.</i>	143
<i>What Drink is best in Vapours.</i>	144
<i>Aperitive Clysters.</i>	144

Tunbridge

# The Contents.

Tunbridge Waters.	144
The Bath.	144
An Electuary to be taken in the Interval of other Remedies	146
Crasſh Broths a great ſweetner of the Blood.	146
Rules of Diet for thoſe who are troubled with Vapours.	146
Their Drink.	147
Why the Cure muſt be different when the ſame Symptom's happen to an open Conſti- tution of Blood.	148
What muſt be done to theſe Patients in Fits like to an Apoplexy, what in Frenzy, and what in Convulſions.	149
What is to be done when they ſwoon away.	150
What Remedies are propperest during the Interval in this Conſtitution.	151
Why Bleeding.	151
Why Vomits.	151
Gentle Aperitive Broths.	152
Gentle Steel Electuary.	152
An Electuary to be taken during the Interval of Spring and Autumn.	153.
What ought to be their chief Diet.	154
The Rule of Living they ought to follow.	155
The removal of Anxieties and Paſſions a great Remedy in this Diſtemper.	156
Venice-Treacle and Jeſuites-Bark com- mended by Sydenham in Vapours.	157

F I N I S.

## ERRATA.

**P**age 4. line 16. for *iowl*, read *rowl*. l. 21.  
*head acks*, r. *heads acke*. p. 12. l. 5. leave out  
*if you please*. p. 24. l. 29. *yet*. r. *get*. p. 25. l. 11.  
*fixness*, r. *fixdness*. l. 17. blot out *so*. l. 21. *Alkaly*,  
r. *Alkaline*. p. 66. l. 9. *Heart*, r. *Heat*. p. 76. l.  
11. *confus'd*, r. *confus'd*. p. 77. l. 7. *Alkaly*, r.  
*Alkaline*. p. 90. l. 4. *Alkaly*, r. *Alkaline*. p. 97.  
l. 2. *such*, r. *fresh*. p. 105. l. 10. *Visculous*, r. *Vesi-*  
*culous*. p. 110. l. 23. *Amydales*, r. *Amygdales*. p.  
140. l. 13. *operative*, r. *aperitive*.

